



ESTABLISHED 1859

Subscription: Fourpence a Week, Ten Shillings a Year.
Summer and Winter Numbers 1s. per Copy.

CHIEF OFFICES: 42 CANNON STREET, LONDON, E.C.

BRANCH OFFICES: 231 ELIZABETH STREET, MELBOURNE,
AND 114A PITT STREET, SYDNEY.

As an Official Journal THE CHEMIST AND DRUGGIST is
regularly supplied to every member of
NINE PHARMACEUTICAL SOCIETIES
in the British Empire.

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THE COMING DIARY.

THE GLOBE EXPRESS (Limited), Finsbury Street, London, E.C., will on Tuesday, December 1, receive "THE CHEMISTS' AND DRUGGISTS' DIARY," 1897, for delivery throughout the United Kingdom as in former years. Their agents will be responsible for the prompt delivery of the Diaries to all subscribers in the large towns, but in the smaller places the copies will be forwarded by passenger-train or by parcel-post, as seems most suitable. In all cases the Diaries will be carriage paid, and a label will be attached to each packet, this:—"This Diary is paid through to destination"; but if a demand is made for payment the subscriber is requested to pay the charge and take a receipt, and by sending it to us the money will be refunded. As we anticipate a large extra demand for these Diaries, subscribers whose subscriptions expire with this issue should remit the ten shillings for renewal to our publisher without delay; otherwise we cannot guarantee to supply the Diary. See the editorial note on p. 790

Summary.

THE present position of cardamoms is discussed in an Editorial note (p. 793).

IN our novelty section are some formulae, and a description of an ingenious truss (p. 779).

SOME interesting personal reminiscences of Sir F. Von Mueller are given on p. 731.

AN interesting suggestion regarding the active principle of hazeline is made by Mr. Gunn (p. 795).

MR. BOOT, Mr. Glyn Jones, and other correspondents continue the discussion on anti cutting (p. 805).

THE sudden deaths of a chemist in Edinburgh and of a chemist's assistant in Kelso are reported on p. 769.

IT is reported that Dr. Alexander Edington, the Cape bacteriologist, has discovered the rinderpest microbe (p. 794).

THE Liverpool Chemists' Association have made feeling reference to the late Mr. A. H. Mason, one of their ex-presidents (p. 771).

WE now print our report on the last analytical salts sent on, and give hints to the students on the detection of boric and acetic acids (p. 766).

SIR B. W. RICHARDSON, M.D., died from apoplexy on Saturday last. A portrait and some observations on his life-work are given on p. 784.

THE Public Benefit Drug Company of Liverpool have submitted to an injunction restraining them from selling spurious Beecham's pills (p. 774).

BOOTS (LIMITED) pay dividends of 6 and 10 per cent. out of their net profits of 10 831/2. "Camwal" shareholders met on Tuesday, and adopted the directors' report with a grumble (p. 774).

IN our correspondence section the discussion on the English language is continued by Mr. Brudenell Carter and others; a letter on Indian situations is amongst the other topics (p. 804).

THE retail members of the executive of the P.A.T.A. have written a reply to Messrs. Boot and Day, which has been circulated to proprietors and wholesale dealers in patent medicines. It is printed on page 783.

MR. JOHN BARCLAY, in his laboratory notes, calls attention to a new diluent for essential oils which has come on the market, and he reports on the quality of commercial tro. strophanthi, describing a method of assay (p. 739).

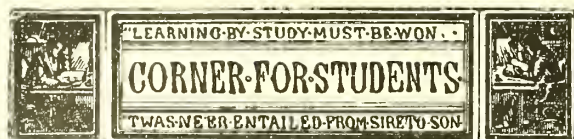
THE General Medical Council is now in session. The President's address, Dr. Glover's pish, a proposal to increase the stringency of the Preliminary examination, and a report on the B.P., are the principal topics reported on p. 786.

THE appeal of the Liebig's Medicated Wine Company (Limited) against the decision of Mr. Justice Kewich, restraining them from selling extract of meat put up in resemblance of the Liebig Company's extract, has been dismissed (p. 774).

WE publish a portrait of a young man arrested at Lichfield on a charge of obtaining money under false pretences. There seems some reason to identify him with the youth whose borrowings have been mentioned in several recent numbers of this journal (p. 785).

OTTO of rose figures largely in this issue. Mr. M. Conroy has come to the conclusion that chemical tests for its purity are not so reliable as the nose (p. 771), but Mr. John C. Umney shows that the chemical tests are an adequate guide (p. 795). We briefly comment upon the matter (p. 794).

MR. E. H. GANE, an English pharmacist resident in New York, has sent home his observations on American pharmacy, in which he controverts Mr. N. H. Martin's statements, and points out wherein English pharmacists may learn from their American confrères. He especially commends the best educational methods in the United States (p. 787).



CONDUCTED BY RICHARD J. MOSS, F.C.S., F.I.C.

REPORTS ON OCTOBER ANALYSIS.

THE powder distributed for analysis last month consisted of 2 parts of lead acetate, 2 parts of fused borax, and 1 part potassium nitrate.

Its calculated composition was—

Pb	..	..	..	..	..	21.85
K	..	..	..	..	..	7.72
Na	..	..	..	..	..	9.11
B ₂ O ₃	..	..	..	..	..	30.89
NO ₃	..	..	..	..	..	12.28
C ₂ H ₃ O ₂	..	..	..	..	..	12.45
H ₂ O	..	..	..	..	..	5.70
						100.00

Traces of iron, chlorine, and the sulphuric radicle were present.

Samples of the powder were sent to 88 applicants, and 40 reports of analyses were received in reply.

Boric acid proved the most difficult of detection, or, rather, the most easily overlooked of the constituents; there were 18 failures in the case of this acid. The other failures were:—Acetic radicle, 11; potassium, 9; nitric radicle, 8; sodium, 5; lead, 4. On the whole, the results show good work.

The turmeric reaction of boric acid, and the green colour imparted to the alcohol-flame by free boric acid, are sensitive and characteristic tests easily obtained. It must be remembered that for the coloration of the alcohol-flame free boric acid is essential; a borate will not produce the effect. It is to liberate the boric acid that sulphuric acid is added, and it must be used in sufficient quantity to ensure the decomposition of the borate present. A considerable excess of sulphuric acid will do no harm. It is the edge of the alcohol-flame that is most strongly coloured, and stirring the mixture while it is burning greatly increases the intensity of the coloration. Copper salts produce a somewhat similar effect; and another possible source of error is the production of ethyl chloride by the action of hydrochloric acid on the alcohol. The colour produced by the burning of ethyl chloride might mislead the student. The turmeric-paper test should always be used in verification of the results obtained with the burning-alcohol test. The most likely source of error in the case of the turmeric paper is the risk of mistaking the mere effect of charring produced by a mineral acid for the red colour that boric acid produces.

In the detection of acetic acid the student who has taken the trouble to cultivate his sense of smell has a very great advantage. Most of the acetates smell distinctly of acetic acid at ordinary temperatures. Several of our correspondents noticed that the powder smelt of acetic acid before they applied any chemical test to it. When the powder was treated with strong sulphuric acid nitrous fumes were evolved, and the odour of acetic acid was to some extent masked. On gently warming the powder with dilute sulphuric acid there was no reduction of the nitrate, and the smell of acetic acid was quite unmistakable; that is, of course, to anybody possessed of the necessary olfactory powers. It is surprising how many persons are unable to distinguish

between odours of a certain type. This is due in part to a physical defect like colour-blindness, but it also arises from pure carelessness, and neglect to train a sense which is scarcely less important to the chemist than the sense of sight.

In the case of lead error arose from ignorance of the fact that lead chloride dissolves freely in hot water. Before concluding that there is no precipitate with hydrochloric acid, when used as a group reagent, the solution should always be cooled.

PRIZES.

The First Prize for the best analysis has been awarded to

MARSHALL K. WATT, Royal Infirmary, Aberdeen.

The Second Prize has been awarded to

EDWARD OCKENDEN, c/o The Tasmanian Eucalyptus Oil Company, 133 Leadenhall Street, E.C.

MARKS AWARDED FOR ANALYSES.

M. K. Watt (1st prize)	..	100	L. S. R.	..	..	67
E. Ockenden (2nd prize)	..	99	R. T. S.	..	..	65
Phycozanthin	..	98	Aqua Pura	..	..	63
Disce aut Discede	..	97	Glycol	..	..	62
Petal	..	96	Pharmacoon	..	..	61
J. Hackett	..	95	W. J.	..	..	60
Felspar	..	94	Nigella	..	..	59
Acetate	..	93	Capsiei	..	..	57
R. Nicoll	..	92	Yttrium	..	..	56
Protoxalas	..	85	P. O. P.	..	..	55
Test-tube	..	83	B. A. Mitchell	..	..	54
H. W. H.	..	82	Elendi	..	..	53
Scipio	..	80	Rita	..	..	51
J. Dyson	..	78	J. H. C.	..	..	50
H. J. C.	..	76	C. J. Packham	..	..	45
Ne M'en Veut Pas	..	75	L. R. D.	..	..	42
Kendal	..	73	Lignum	..	..	40
Constant	..	71	Pro Virili Parte	..	..	35
Old Vigornian	..	70	Mareus	..	..	25
Beginner	..	70	C. T. J.	..	..	20

TO CORRESPONDENTS.

Prizes.—The students to whom prizes are awarded are requested to write at once to the Publisher, naming the book they select, and stating how they wish it forwarded.

Any scientific book that is published at a price not greatly exceeding half a guinea may be taken as a first prize.

Any scientific book which is sold for about five shillings may be taken as second prize.

Note.—All communications should include the names and addresses of the writers.

PROTOXALAS.—The flame-coloration of the original powder is not always a sufficient test for the alkali metals. The colour produced by other substances may mislead, or the potassium coloration may be obscured. Part of the solution, to which ammonium carbonate has been added as a group reagent, should always be examined for the alkali metals after ammonium salts have been expelled. The platinic-chloride test for potassium should always be used.

TEST-TUBE.—You omitted to look for boric acid. The residue from the action of sulphuric acid on the powder should have been treated with alcohol, and the alcohol set on fire.

H. W. H.—When the powder was treated with sulphuric acid, in the preliminary examination for the acids, there was an unmistakable odour of acetic acid.

SCIPIO.—You did not observe the action of sulphuric acid with sufficient care; the vapour of acetic acid was evolved before heat was applied.

J. DYSON.—See remarks to "Scipio."

H. J. C.—A more careful observation of the effect of heat on the powder would have shown that deflagration took place at a certain temperature. In applying the ferrous-sulphate test for nitric acid you must remember that a slight elevation of temperature will decompose the compound of ferrous sulphate and nitric oxide which forms the brown ring.

NE M'EN VEUT PAS.—See remarks to "H. J. C."

KENDAL.—The precipitate you obtained with calcium chloride was probably calcium borate. You should have tried whether the precipitate was converted into a carbonate by gentle ignition.

CONSTANT.—With a little care you would have found that hydrochloric acid produced a considerable precipitate of lead chloride. All that was necessary was to cool the solution. Lead chloride is freely soluble in hot water.

OLD VIGORNIAN.—Platinic chloride is the best reagent to use for pre-

precipitating potassium. The yellow-crystalline precipitate of potassium-platinic chloride contains only 16 per cent. of potassium, so that a considerable precipitate is produced by very little potassium, provided too much water is not present.

L. S. R.—You omitted to examine the powder for potassium. See remarks to "Protoxalas."

R. T. S.—The temperature of the solution and its degree of concentration are important points in deciding whether a precipitate of lead chloride is possible. See remarks to "Constant."

AQUA PURA.—You were mistaken in supposing that the metallic beads were brittle; on the contrary, they were very malleable, and so't enough to yield to one's nail.

GLYCOL.—It is remarkable that you detected ammonium by four different methods. There was none in the powder. Could the ammonia have been derived from the atmosphere of the room you worked in?

PHARMACON.—Though your report is not very clear on the point, it appears that you used portions of the original solution where you should have used the filtrate from the previous group. This would lead to serious errors.

W. J.—The deflagration was not so mis'ewling as you supposed. You should never pass anything of the kind over without some attempt to explain it. When lead is present you are certain to encounter it in the sulphuretted-hydrogen precipitate, because lead chloride is too soluble even in cold solutions, to admit of the complete separation of the metal in that form.

NIGELLA.—The effect you attributed to a hypophosphite was due simply to the action of the nitrate on the carbon compound present.

CAPSIC.—You should exercise more discrimination in distinguishing between the chief constituents of the powder and the mere traces of impurities it contained.

YTRIMUM.—Solubility in dilute hydrochloric acid is quite compatible with the presence of lead. See remarks to "Constant."

P. O. P.—You should have given a summary of your results, which, by the way, were somewhat obscure and rather difficult to summarise.

B. A. MITCHELL.—You imposed upon yourself an unduly short limit of time. Speed in working is a secondary consideration; thoroughness and accuracy are the main points.

ET'AL.—The flame-coloration of the original powder left little doubt as to the presence of sodium. Before you concluded that sodium was absent, you should have examined part of the solution to which you had added ammonium carbonate as a group reagent.

BITA.—The cobalt test is applicable to white infusible residues, but not to fusible substances. The blue substance you obtained was simply a borax bead coloured with cobalt.

O. J. PACKHAM.—In applying the burning-alcohol test for boric acid it is probable that you did not use nearly enough sulphuric acid; a decided excess should be employed, and the mixture should be stirred with a glass rod while the alcohol is burning.

L. R. D.—The solution to which you added ammonium oxalate to precipitate calcium could not have yielded a precipitate, because it contained free nitric acid in which calcium oxalate is soluble.

PRO VIRILI PARTE.—An important distinction between the oxides of lead and zinc which you failed to observe is that the zinc oxide is yellow only when hot. It turns white on cooling; lead oxide remains yellow on cooling.

MARCCS.—The test for nitric acid depending upon its reduction by nascent hydrogen is occasionally useful, but for general convenience and sensitiveness the ferrous-sulphate test is to be preferred.

C. T. J.—The loss of the solution was fatal; it was a mistake to have all your eggs in one basket.

programme:—Messrs. H. E. Hedgcock, H. G. Price, Little, Geo Long, Brown, E. L. Carter, Howes, J. King, E. Beckwith, C. L. Clutterbuck, and Professor Clutterbuck, Mr. E. A. Hedgcock officiating at the piano.

The annual dinner of the North-east Lancashire Chemists' Association was held in Blackburn on the evening of November 19. The chair was occupied by Mr. Critchley, and after dinner a short musical entertainment was provided, and a number of toasts were proposed and replied to in short and bright speeches, several useful suggestions being given with regard to the future working of the Association, which the committee intend acting upon in order to make the meetings as instructive, social, and interesting as possible.

The annual *conversazione* in connection with the Manchester College of Pharmacy was held on Saturday last at the College, 225A and 227A Oxford Street, Manchester. The company included students, past and present, and their friends. The decorations were carried out by a committee of students. The large Minor lecture-room was transformed into a concert-room, which was bright with plants and cut flowers. Curtains had been artistically arranged by the lady students of the College. In the smaller class-room was a table full of electrical apparatus, and Geissler's and Crookes's tubes were aglow, and "shocks" were given. The balance-room was set aside for smoking, and refreshments were provided in the large museum, which had been tastefully arranged by Mrs. Charles Turner. Microscopes were shown in the dispensary, and in the Minor laboratory a large selection of chemical apparatus in working order was shown. A programme of music commenced at 7.30 prompt, after a few words of welcome from Mr. Turner. The "Orpheus" quartettes were highly appreciated, and so were the performances of Mr. Albiston Jee, whose exposition of the "art of chapeaugraphy," during which he obtained about twenty-five different forms of head gear from a simple ring of felt, was watched with great interest.

Carbolic-acid Poisonings.

Maria Beresford, widow (56), of Chester, had been drinking lately, and on November 19 committed suicide by drinking carbolic acid, which she kept in a sauce-bottle.

John Ponton, Benedict Street, Bootle, died at the Bootle Borough Hospital, on November 19, from carbolic-acid poisoning. He had been in depressed spirits for some time past.

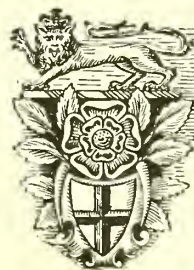
Maud Marian Lee, one of the nurses at St. Olave's Union Workhouse, Horselydown, has poisoned herself with carbolic acid. Previously she had sent in her resignation to the Guardians in anticipation of her marriage.

An inquest was held at Shepton Mallett, on November 21, respecting the death of James Theodore Small (19) from carbolic acid poisoning. The Coroner said carbolic acid was not a scheduled poison, and so long as it could be bought in a crude state such events as they were inquiring into were likely to occur.

At Preston, on November 18, an inquest was held respecting the death of Nathan Hall Ellis. The deceased had killed himself with carbolic acid, which he bought at the shop of Mr. James Rae, chemist and druggist, stating he wanted it for disinfecting. The Coroner: Did you know him before? Mr. Rae: No, sir. The bottle was produced, and was labelled "Carbolic acid—Poison." The Coroner observed that one-half the quantity the bottle contained would be sufficient to cause death. The Foreman of the Jury: Is there not a statutory law as to the sale of carbolic acid? The Coroner: No; this does not come under the Act; it is a disinfectant, and is sold broadcast.

Leicester Bacteriological Institute.

The annual report of the director to the Leicester Medical Society of the work done in the laboratory during the year ending October, 1896, has been issued. The number of cases sent for diagnosis include 113 specimens for examinations, 66 swabs and membrane for diphtheria, 22 sputa for tubercle, 5 excretions for typhoid, and 6 waters, 5 urines, 7 morbid growths, and 3 urethral discharges for bacteriological examination. Two classes in bacteriology were given during the year, and two medical men were engaged in private



English News

The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.

Festivities.

The first annual supper of Davy, Yates & Hicks's Cricket Club was held at the Eastcheap on November 14. The company numbered nearly fifty. Mr. Richard Aird presided, and the evening was pleasantly passed in speeches and songs.

The Brighton Junior Association of Pharmacy had a musical and social evening on November 18, Mr. E. Histed, in the chair. The following gentlemen contributed to the

work at the laboratory. Diphtheria antitoxin serum has been prepared, and the strength of the serum has gradually increased. It is hoped that serum will be sent out equal in strength to any other now supplied, the number of horses having been augmented. This Institute, we may add, was founded and is maintained by Messrs. John Richardson & Co., Leicester (Limited).

Chemists at Football.

Pharmaceutical Football Club v. St. Michael's United — This match, played at Wormwood Scrubs on Saturday, resulted in a victory for the "Pharmaceuticals" by 2 goals to none. Team: Lean (goal), Smith and Lilly (backs), Nelson, Webster, and Hapfold (half-backs), Day, Tebbutt, Jones (centre), Jackson, and Fothergill (forwards).

Youthful Shopbreakers.

At Colne Police Court on November 20, two boys, whose heads just reached the top of the dock, named Hartley Hopkinson (11) and Frank Houghton (9), were charged with breaking into and entering a lock-up shop and stealing a quantity of sweets and a box of compasses, the property of Joseph Dawson, chemist. The boys were discovered hiding under the counter. The Bench ordered each of the lads to receive five strokes with the birch rod.

Beware of the Benzoline cask

At Nottingham on Saturday last, on the premises of Mrs Proctor, chemist, St. Ann's Well Road, Albert Ellis, errand-boy, was instructed to wash out an empty benzoline cask with water. The cask, which had only recently been brought to the premises, was required for storing ink. The lad, instead of at once filling the cask with water, held a lighted match against it, possibly with the idea of better seeing his work. A loud report followed immediately, and the end of the barrel was blown out. Ellis was struck on the mouth, and knocked some distance across the yard and rendered unconscious. He was taken to the General Hospital, where he was found to be seriously hurt, but is progressing favourably.

An Amateur Medicine woman.

At the Manchester Coroner's Court, on November 19 the death of Lily Bentley, the daughter of a Manchester warehouseman, 5 years of age, was inquired into. The child's mother said on the previous Saturday night she sent to the shop of Mr. Bagshaw, chemist, 88 Wellington Street, Bradford (Manchester), for twopennyworth of laudanum, and like quantities of oil of aniseed, tincture of rhubarb, and magnesia. These she mixed with a pint of water, and gave it to a neighbour as medicine for a child. She then washed out the bottle which contained the laudanum and aniseed, and placed it in the cupboard. On the Monday she sent a girl, named Emma Hames, 15 years of age, with this bottle, which was labelled "Laudanum—Poison," to the same shop for twopennyworth of tincture of rhubarb. Seeing that the druggist had not put on a fresh label, she tore off part of the old label "Poison." The same night she gave her child a teaspoonful of the "rhubarb," and the next morning found her dying. Dr Thomas was called in, and the child died at 9 o'clock. The doctor had failed to arouse it from its sleep, which he attributed to opium. Newton Lees, a qualified assistant to Mr. Bagshaw, chemist, and in charge of his shop in Wellington Street, remembered the witness Hames coming to his shop several times, but not on the day stated. On the Sunday night she purchased one pennyworth of laudanum and a like quantity of oil of aniseed in the bottle produced. There was a small quantity of dark-coloured mixture left in the bottle, and this the foreman of the jury and Mr. Lees tasted and said it was a mixture of laudanum and oil of aniseed. A *post mortem* examination of the deceased by Dr. Collier revealed the strange fact that the child had died from ambulatory typhoid fever, and said the symptoms might easily have been mistaken for opium-poisoning. The jury at once returned a verdict of death from typhoid fever.

Plymouth and District Chemists' Association.

At the meeting of this Association held on November 24, seven new members were elected. The Secretary, Mr. James Cocks, announced that an offer of books for the library had been received from Mr. E. N. Butt, of London,

consisting chiefly of educational volumes and pharmaceutical records. It was agreed to accept the same, several science text-books also being given by Mr. J. R. Johnson. Messrs. Ginn & Porter were appointed honorary solicitors to the Association in succession to the late Mr. T. W. Martyn, of Devonport. Owing to increased membership, more commodious rooms have been engaged at the Oddfellows' Hall, Union Street, to be occupied early in January next. A committee was appointed to arrange for the annual pharmacy hall, at the Stonehouse Town Hall, at the end of January. Mr Maurice (Plymouth) was thanked for his kindness in entertaining the visitors and committee during the recent Conference.



Irish News

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Medicine contracts.

Messrs. Adamson & Co's (B'lna) tender for medicines has been accepted by the Killala Board of Guardians, it being the lowest of five. Messrs. Smith & Sheppards (of Dublin) were declared contractors for the medical and surgical appliances at the same meeting.

Personal

Mr. Mitchell, Lower Sackville Street, Dublin, has been appointed manager of Messrs. Hamilton, Long & Co's pharmacy, vice Mr. Webb, lately deceased.

Mr. Henry O'Reilly, formerly resident in Dublin, but who has for several years past been living in England, has returned to Ireland, and proposes to resume business as a pharmacist in his native city.

Serious Charge against a Druggists' Assistant.

On Monday, at the Cork Police Court, Michael Dominick O'Connor, druggist's assistant, was remanded on a charge of embezzling the sum of 300/., the property of his employers, Messrs. Ryan & Co. (Limited), druggists. The accused admitted that his accounts were short. He intended to replace the sum, but had not the means of doing so. He said he only took the money as a loan.

Company pharmacy in Dublin.

Messrs. Williams & Co. (Limited), of Dublin, who, as stated last week, intend to carry on a compounding business, will do so at their house in Lower Bagin Street, opposite the establishment of Mr. Vice-President Downes.

Carbolic-acid Poisoning.

A child named McCrethey, 4½ years old, died at Belfast on Monday from drinking some carbolic acid which he found in a bottle on the top of a chest of drawers.

MEDICAL AMENITIES.—The local paper of the little town of Schildau in Saxony contains the following advertisement from the old-established medical practitioner relative to the arrival of a new colleague:—"One of our citizens has again succeeded in enticing a young medical man to rent his vacant house and set up a practice at Schildau. Although I know that this new practitioner will not be able to maintain himself for long in this town, I have decided not to remain inactive, and therefore declare as under:—1. To all those who avail themselves of the services of the new Medical Man I shall never again give any future medical aid whatsoever. 2. From October 15 I will allow a discount of 50 per cent. off my bills to anyone in Schildau and the neighbourhood who asks for it, and I reserve to myself the right to announce a further discount, or to treat my patients gratuitously.—(Signed) KNOENER, M.D."



Scotch News

The Editor is obliged to correspondents who send local newspapers containing items of interest to the trade. He will be further obliged if such paragraphs be marked in all cases.

Personal.

Mr. John Rodger, chemist, has been unanimously elected Provost of Inverary.

Mr. Jas. A. Reid, chemist and mineral-water manufacturer, Helensburgh, gained the bronze medal and diploma of merit at the Brewers' Exhibition in London. The honour is the greater this year, as all previous medallists were allowed to compete.

Sudden Deaths.

Mr. John Kinninmont Nicol, chemist and druggist, died suddenly on November 17 at his house, 4 Nicolson Square, Edinburgh. On the previous Saturday evening Mr. Nicol had accidentally taken an overdose of laudanum. He was taken to the Royal Infirmary, where he remained till Tuesday afternoon, when he was discharged. He died on the following evening from syncope. Mr. Nicol, who was 43 years of age, had been for a considerable number of years in business at 139 High Street, Edinburgh. He leaves a widow.

On Tuesday morning a young lad named Andrew Christie, assistant to Mr. Alexander, chemist, Kelso, was found dead on the premises of his employer. It was at first supposed that death was due to poisoning, but we learn that death has been certified as due to epileptic seizure.

French News.

(From our Paris Correspondent.)

THE PHARMACISTS OF DIJON are having a dispute with the Municipality over a question of prices. A short time ago Dr. Roland, in the name of the town council, invited the pharmacists to a meeting in order to explain to them certain alterations proposed in the local dispensary service. The suggestion was that drugs and medicines for the indigent poor should be supplied at cost price, also that the same conditions should be extended to the members of the various trade syndicates in Dijon. Dr. Roland added that if the pharmacists did not accept this proposal, the municipality would establish a co-operative pharmacy. The chemists protest against such a course, and twenty-five of them have signed a petition to the Mayor urging its unfairness. They point out that practically everyone can belong to one or another of the existing syndicates, so that the occupation of the Dijon pharmacists would become largely that of philanthropists. Even the ordinary trade expenses, it is pointed out, are not considered by the proposal. It seems that a municipal or co-operative pharmacy is a long cherished project of the town council, and the pharmacists suggest that the proposal was made with the knowledge that it could not be accepted, merely as an excuse for saying that no understanding with the pharmacists is possible, thus giving a plausible reason for attempting to start a co-operative pharmacy. It is probable, however, that there is some electioneering scheme behind the question, as the Dijon Municipality must be aware that municipal pharmacies were declared illegal some two years ago, when an attempt was made to start one in Lille.

PHARMACY IN THE COURTS—A case was recently heard before the Tribunal of Commerce at Alger, the plaintiff being a pharmacist's assistant, who had been abruptly dismissed and claimed an indemnity in lieu of notice. The defendant pharmacien pleaded that, not being a tradesman in the ordinary acceptance of the word, the Tribunal was not

competent to try the case. The Judge held, however, that as the pharmacist's business consists in the sale of articles such as specialities, &c., in addition to making up prescriptions, he must be considered as an ordinary tradesman, especially as in the case in question part of the assistant's remuneration was 5 per cent. on all business transacted in the pharmacy. The further hearing of the case was adjourned in order to allow the plaintiff to bring additional evidence of the alleged wrongful dismissal.—At Auxerre the Pharmacists' Syndicate of Yonne charged a pharmacist with illegal practice on somewhat novel grounds. Appreciating the advantages of the rapid delivery by bicycle, he had adopted that mode of sending out medicines, and as his messenger had spare time, he employed him in calling for, or even soliciting prescriptions. This latter procedure was of course annoying to the other pharmacists in his neighbourhood, but did not come within the scope of the law. The messenger, however, was finally supplied with a basket for his bicycle, in which he carried a small assortment of specialities and a few medicaments of current use for immediate sale while out. The bicyclist being unqualified to act as a pharmacist, laid himself open to the charge of "illegal practice" and he was summoned for selling borated vaseline to a lady at her own residence, the pharmacist employing him being declared responsible. A fine of 500f. (20*l.*) was imposed, but was rescinded under the First Offenders Act.

PHARMACEUTICAL AND MEDICAL EXAMINATIONS IN FRANCE—The recent article on the Paris Superior School of Pharmacy led up to a little conversation with one of the leading English chemists who took his degree as first-class pharmacist at that institution. As he also possesses the diploma of a French M.D., the *C. & D.* man was curious to know which examination he thought the stiffest, and was assured that the pharmaceutical test was by far the severer one. The studies required are very varied and of a highly scientific character, and of course the candidate may be (though possibly he is not always) examined in every one of them. Excellent analytical chemists are thus turned out, but analysis is not the most constant occupation of the average "pharmacien"; a young fellow, after several years' hard scientific study, sometimes get discontented when he finds himself behind a counter with a strictly moderate salary, or compelled to make his own living out of "penny customers" and "cut" patents. This, our informant thought, might partly explain the simmering discontent which seems to be the normal state of the French pharmacist, in spite of the efficient way that legislation takes his part against his various enemies and competitors. The English subjects who have taken the "first class" certificate at Paris might be almost counted on the fingers of one hand. This is to be regretted from one point of view, as the French pharmacist who inscribes "English chemist" on his shop-front scarcely does credit to that honourable designation. We are told that he is frequently insufficiently conversant with English to make up a prescription, mistakes "grains" for "grammes," and if he does not employ a qualified English assistant frequently sends his "aide" to the nearest English chemist to get the prescription made up.

Foreign and Colonial News.

CINCHONA-PLANTING IN JAVA—At the annual general meeting of the Tji-Kembang Cinchona Company of Java, held at Rotterdam on November 9, it was stated that the receipts for the last financial year amounted to only 7,906*fl.*, and the expenditure to 29,178*fl.*, leaving a net loss of 21,272*fl.* The average gross price of the 49,134 kilos. of cinchona-bark sold at Amsterdam during the year was 2.75*c.* per unit, but the net proceeds, deducting expenses, only 2.11*c.* There has been a great loss of young *Succirubra* trees on the company's plantations owing to ten months of almost uninterrupted rain, succeeded by one month of drought.

THE MADRAS "CREAM OF MALT" CASE—The case against W. D. & W. F. Smith, chemists, of Madras, who were prosecuted by a Mr. J. H. Webster for cheating in

connection with the substitution of a bottle of Kepler malt-extract for one of "cream of malt," has come to an end at last. The main charge was dismissed some time ago, but there remained one of "insult and defamation," based upon a letter written by one of the accused to the plaintiff in which the last-named was called a "man of straw." At the hearing of this charge on October 29 the accused tendered a written apology, not to be published in the newspapers, and the plaintiffs declared himself satisfied therewith. The case was accordingly dismissed.

THE DECLINE AND FALL OF COCHINEAL.—There has lately been some slight revival in the cochineal industry, but there is no hope whatever that that business can ever again become, as it once was, the principal one of the Canary Islands. Cochineal was only introduced into those islands in 1826, and had a marvellous success. In 1841 over 100,000 lbs. were exported. In 1852 some 783,000 lbs. went abroad, and in 1869 over 6,000,000 lbs., valued at about 790,000*l.* In the next few years the price of cochineal fell greatly, as a consequence of the invention of aniline dyes. Cochineal in 1874 was only worth 1*s* 6*d* per lb.; in 1830 it had been worth 10*s* 6*d*. The boom in cochineal had been so great that vines and all other crops were torn up to make room for the new valuable product. With the fall in price came universal ruin to the growers, which plunged these islands from wealth into great poverty. In 1886 2,330,000 lbs. only were exported; in 1895 Tenerife alone exported 1,201,576 lbs., representing a value of 94,167*l.* The value of the dye has lately risen slightly, and has encouraged a somewhat wider cultivation.

THE IMPORTATION OF MEDICINES INTO ITALY.—We have on previous occasions given particulars of the strict laws that have been enacted in Italy on the subject of the importation of foreign medicines, especially proprietary articles. These regulations have recently been slightly relaxed in this particular—that all medicinal preparations labelled with a formula in which it appears that they are exclusively composed of drugs known to the Italian Pharmacopœia may be admitted without further trouble upon payment of the ordinary Customs duty. With regard to all other articles classed as specialities, the consent of the Superior Board of Health at Rome must be obtained before importation is allowed. A list of the articles falling under the last-named description, of which the importation has been already permitted, has just been issued. It consists mostly of German and French specialities, but contains the following British and American articles:—Hawley's cascara capsules, cerebrine, cuticura resolvent, A. & H. thyroidine, Eno's fruit salt, extract of hamamelis virginica, Dinneford's fluid magnesia, Eiliman's embrocation, listerine, Krewel's pills, Santal-Midy capsules, Rowland's kalydor, safe cure, Fellows's syrup, B. W. & Co.'s cascara tabloids, and beef-and-iron wine and Coleman's wincarnis.

HOW DIAMONDS ARE MADE.—The *Pharmaceutical Era* gives the following vivid description of how Professor Moissan made diamonds in view of a New York audience:—

The apparatus consists of two blocks of burnt limestone set one upon the other with an opening on each side for the carbon electrodes, and in the centre, just between the points of the electrodes, a small cavity to hold the crucible. Professor Moissan first sprinkled the cavity with powdered magnesia to prevent the calcium from combining with the carbon. He then put in the crucible, containing some soft iron filings and charcoal. He adjusted the electrodes nicely, put on the upper block as a cover, and gave the signal to his assistants to turn on the current. The flames shot out on each side, and there was a sound as of the cutting of iron till the indicator reached 2,500° C. Then the electrodes became red hot, and flying sparks followed the flame. The block of limestone rested on a wooden base, which, however, was not burnt; and, when the sounds had subsided into a hiss, Professor Moissan put on a pair of coloured glasses to protect his eyes from the heat and from flying sparks, and stepping up to the furnace laid his hand upon it. After ten minutes of this extraordinary heat, Professor Moissan removed the cover of the furnace with his bare hand, although the interior was at a white heat. The dazzling light filled the hall so that people had to shade their eyes. With a pair of tongs he removed the fragments of the furnace which had fallen, and then lifted out the white crucible, holding it before the audience a moment, and then plunging it into a glass bowl full of water. When it had cooled he broke the crucible and held up an ingot the size of a bullet, within which the diamond crystals would be found.

The audience was enthusiastic about the lecture, and

Professor Doremus voiced their sentiments by saying that he was enchanted by the beautiful exhibition, and now understood the meaning of the saying that a philosopher gained his title by fire.

Australasian News.

THE following notes are mainly based upon information contained in the October issue of *The Chemist and Druggist of Australasia*, published at Melbourne. Copies of that paper (price 6*d* each) and information concerning it may be had upon application to the Publisher, C. & D. of *Australasia*, 42 Cannon Street, E.C.

TASMANIAN EUCALYPTUS OIL.—The officially-declared value of the exports of eucalyptus oil from Tasmania was 596*l.* in 1894, 3,096*l.* in 1895, and 1,852*l.* in the first five months of 1896.

THE QUEENSLAND CUSTOMS TARIFF ON DRUGS.—The representations made by the Queensland chemists to the Treasury in favour of the admission, duty free, of all crude drugs have not met with much success, only aloes, calumba, camphor, cascara sagrada, cinchona-bark, ergot, gentian, iodine, ipecacuanha, and senega having been passed by the Government. These drugs will be free after March, 1897; up to that time they will continue to pay 25 per cent. duty.

THE CUSTOMS DUTIES ON MEDICINES.—According to the Government Statist of Victoria, the Customs taxes on medicines in the seven divisions of Australasia yielded 62,262*l.* in 1894. The most heavily-taxed country in this respect is New Zealand, where 16,171*l.* was collected. Then come Victoria (12,346*l.*), N.S. Wales (10,300*l.*), Queensland (9,915*l.*), S. Australia (7,318*l.*), W. Australia (3,131*l.*), and Tasmania (3,081*l.*). The amount in shillings per head of population works out as follows:—W. Australia, 62; N. Zealand, 574; Queensland, 442; S. Australia, 415; Tasmania, 38; Victoria, 208; N.S. Wales, 160.

INTERCOLONIAL PHARMACEUTICAL RECIPROCITY.—At the last meeting of the Pharmacy Board of Victoria a resolution in favour of Australasian intercolonial pharmaceutical reciprocity was unanimously adopted. The Board suggests that a Board of Examiners shall be appointed, consisting of one representative of each of the Australasian colonies, and that a common examination be prepared by one or two persons appointed by that body. If this scheme should be agreed upon by the other countries, it seems probable that the standard of examination would be an entirely new one, more stringent than that now in force in some of the colonies, and less so than those obtaining in others.

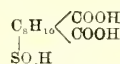
A PHARMACY BILL IN N.S. WALES.—A new Pharmacy Bill is now before the N.S. Wales Parliament, and will shortly be brought up for second reading in the Legislative Assembly. As originally drafted, the Bill contained several clauses highly objectionable to the pharmaceutical body. One penalised prescribing, or the "practising of medicine and surgery," by chemists or persons in their employ with a fine of from 5*l.* to 50*l.* Another provided that medical practitioners should be entitled to registration as pharmacists without examination. A third perpetuated the appointment of Government nominees to permanent seats on the Pharmacy Board. It was further proposed that persons who had been in business as chemists in any part of the world before the passing of the Act could claim registration under it. A deputation of the Pharmacy Board had a conference with Mr. Reid, the N.S. Wales Premier, at which these objectionable clauses were discussed and struck out, with the exception of that relating to counter-prescribing, which was modified to the "right of chemists to practise in their own shops, in accordance with rights and privileges enjoyed hitherto"; but pharmacists are not to be allowed to go out of their shops and practise, as many of them are in the habit of doing. Mr. Reid promised the chemists that he would do all he could to get the Bill through, and that he would "tell the doctors in the other House that if they did not pass it in its amended form, he would not pass their Medical Bill."

The Winter Session.

CHEMICAL SOCIETY.

THE Fellows who attended last week's meeting could not rouse themselves to even a low point of enthusiasm regarding the proceedings. The front bench was almost empty until about 9 o'clock, when it overflowed through such men as Professor Dewar, Dr. Armstrong, Dr. Mond, Dr. Collie, Dr. Wynne, Mr. Otto Hehner, Professor Smithells, Mr. Cross, Mr. Pickering, and several other members of Council coming in; but some of them flitted out and in as if papers were a bore, and the only thing interesting in life was the Council meeting which followed. The lethargy broke towards the end, however, when Professor DUNSTAN read a paper by Mr. C. O'Sullivan and another on the identity of dextrose from various sources, and a sort of Bass *versus* Worthington talk ensued. As for the papers, we must dismiss them in a few sentences, for they bear but remotely on the drug-trade.

Dr. LAPWORTH communicated the first, by himself and Dr. Stanley Kipping, on a sulpho-camphoric acid, $C_{10}H_{16}SO_7$, otherwise—



which they have made by oxidising sulphodibromo-camphoric acid with ammoniacal permanganate. The object was to see if they could get nearer the constitution of camphor, but further than to obtain the two carboxylic groups as above shown they have not got. Dr. KIPPING, however, added to his colleague's remarks that Marsh and Cousins are quite wrong in saying that sulpho-bromocamphoric acid is nitrated (the sulphonic group being pushed out) by boiling with nitric acid. They have tried it twenty-seven ways and failed—at which there was much laughter from the back benches.

Mr. POPE informed the meeting in his pleasing way that when camphoric acid is dissolved in acetone it crystallises out with half a molecule of acetone, therefore $2C_{10}H_{16}O_7 \cdot Me_2CO$. The remarkable thing about this substance is that it exactly resembles camphoric anhydride in crystallographic appearance and habits. This is the first case on record of such close resemblance. The acetone compound becomes white like porcelain on exposure.

Professor DUNSTAN read bits of several papers by Dr. P. C. Ray on mercury hyponitrites, nitrites, &c., with a running commentary of his own, which discounted the importance of the Indian chemist's discoveries—*e.g.*, that when mercury is dissolved in sufficiently dilute nitric acid mercurous nitrite is produced. The proceedings were closed with the O'Sullivan paper, in which it was shown that dextrose (glucose) prepared from cane and beet sugars, from lactose and from starch, are identical in copper-reducing power, an assertion which he proved by specific gravity, specific rotation, and copper-reduction data. Thereupon Mr. LING, Mr. H. T. BROWN, and Mr. MORRIS began questioning the professor, and to satisfy them he read the whole paper, but still the questions went on, so incredulous did they appear of the O'Sullivan results. Thus the meeting closed.

LIVERPOOL CHEMISTS' ASSOCIATION.

AT the meeting of this Association held on November 19, Mr. M. Conroy, F.C.S. (President), in the chair, Mr. T. H. WARDLEWORTH exhibited specimens of

SPURIOUS KOLA

which had come on the Liverpool market some time ago from the West Indies, and which he believed were identical with those referred to in the *Pharmaceutical Journal* of October 31, but he failed to identify them with the *Dimorphandra excelsa* (Mora). There was a slight resemblance to the seed of *Stereulia acuminata*, especially when the seeds were split, whereas the seed of the *Dimorphandra excelsa* (Mora), according to Bailey in his "Economic Botany," was contained in a pod of 7 or 8 inches long, and the

single seed nearly filled the pod, which was about 3 inches broad. It was evident, therefore, that the so-called kola-nuts, while a species of *Dimorphandra*, were not the seeds of the *D. excelsa* (Mora). The importers stated that the article was largely used for the feeding of cattle.

THE LATE MR. A. H. MASON.

MR. EDWARD DAVIES read an appreciative tribute to the memory of his late friend, Mr. A. H. Mason, especially in regard to his Liverpool life. He stated that Mr. Mason was elected a member of the Liverpool Chemists' Association in 1864. He became Secretary in 1870, and was President in the years 1874-76. With the exception of Dr. Edwards, he was the only one who had held that office for three consecutive years. During his connection with the Association he read papers on chloral hydrate, hydrocarbons homologous with benzene, the manufacture of glycerine, on crystallised glycerine and croton chloral, notes on the 1874 Additions to the B.P. of 1867, antiseptics and disinfectants, chloroform, the history of anaesthesia, peroxide of hydrogen, odours, perfumes and flavours, the condition of pharmacy—should it be under State control?

Mr. Davies moved that a letter of condolence be sent from the Liverpool Chemists' Association to Mrs. Mason and family, expressing its sympathy with them in their great loss, and its grateful recollections of the many services which her husband rendered to it during the many years of his membership. The motion was seconded by Mr. T. F. ABRAHAM and carried unanimously.

Mr. T. S. Wokes then took the chair, while Mr. CONROY read the two following papers:—

SODIUM BROMIDE.

Mr. Conroy pointed out that the B.P. standard of purity for the article is that 10 gr. of the dry salt should require for complete decomposition 960 grain-measures of volumetric solution of silver nitrate. This is equal to 98.88 of true sodium bromide. He had found it difficult to obtain the salt of the required strength, and the result of some experiments showed that, when carefully dried, sodium bromide reabsorbed from 2 to 5 per cent. of moisture when kept in stock in a bung jar under ordinary conditions, while some that had been kept in an ordinary shop-bottle in a dispensary for some months lost 10 per cent. on drying at 212° F. This showed the necessity in testing this article to observe that the Pharmacopoeia requirement of strength is on the dry salt. The word "dry" was evidently inserted in the Pharmacopoeia with a full knowledge of its hygroscopic nature. Mr. Conroy stated that inspectors under the Food and Drugs Act had been going round among Liverpool chemists with a prescription containing sodium bromide, syr. aurant., and water, and it would be interesting to know whether analysts made allowance for the hygroscopic nature of the chemical.

Mr. ED. DAVIES, F.C.S., said the absorption of water by sodium salts was a well-marked characteristic, especially in the case of the chloride. It had been said many years ago that the absorption of water by the chloride was due to impurities, especially the presence of chloride of magnesia. He had made experiments with a perfectly pure chloride, and found that the absorption of water from the atmosphere under normal conditions amounted to fully 11 per cent. No doubt the bromide and iodide would show the same tendency.

Mr. Conroy's second paper was entitled

NOTE ON OTTO OF ROSE.

The author referred to the "very excellent article" on the otto-of-rose market in THE CHEMIST AND DRUGGIST of September 19, giving an extract from the Bulgarian correspondent of this journal, in which reference was made to the prevalent practice of adulteration. In this extract approval is given to the principle of rejecting all otto with a freezing-point under 15° R. = 65.7° F., and buyers are exhorted to insist upon being supplied with an otto having the following physical constants:—Freezing-point, 65° to 68° F.; *s.g.*, at 86° F. = 30° C., .850 to .856; opt. rot., -2.3° to -2.7°. These figures, it is said, cover pure otto from all the 153 Bulgarian rose-villages. On the other hand, a correspondent of the same journal, signing himself "An Old Hand," says that a very large proportion of the high-

freezing oils are, by a manipulation in distilling, artificially brought to a crystallisation-point far beyond 70° F., and may then safely be adulterated and yet retain a satisfactory average degree. Mr. Conroy's object was to show that adulteration may be carried on to a considerable extent in spite of the physical constants that we are asked to rely on. One great difficulty is the impossibility of obtaining absolutely pure samples as typical standards. So great is this difficulty that, when the British Chamber of Commerce in Constantinople last year sent a delegate to Kazanlik to secure an absolutely pure type sample of the oil, that gentleman returned without the sample, because he had become convinced that even superintendence during the distilling-process is futile, because the farmer sprinkles the freshly-picked rose leaves with geranium oil so as to increase the yield. Mr. Conroy agreed that the physical tests referred to were worth little in forming an opinion on the genuineness of otto. While one authority asserts that the freezing-point of pure otto ranges from 65° to 65° F., "An Old Hand" (*C. & D.*, October 24, page 631) states that there is an actual range of 10° to 11° between high and low freezing otto. But, taking 65° to 68° , the smaller range, Mr. Conroy found that otto, with a freezing-point of 68° F., actually required the addition of 11 per cent of geranium oil to reduce the freezing-point to 65.2° F. This being the case within a range of 3° , it is evident that with a range of 10° to 11° a much larger amount of geranium oil could be added. So much for the value of this test.

The author then referred to the sp. gr. test, which can easily be worked out by calculation. The range given is .850 to .856 at 30° C., equal to 86° F. At this temperature a sample of geranium oil taken from stock was found to be .888. With geranium oil at this gravity, and otto at .850, the following sum shows by alligation that 6 parts of the former can be added to 32 parts of otto, thus:—

	856	
850		888
32		6

This makes 38 parts of mixture at the higher specific gravity of .853, and a sum in proportion ($38 : 100 :: 6 : 15.8$) shows the mixture to contain 15.8 per cent of geranium oil. The value of this test is therefore not very great, and as it is possible to get a geranium oil of less density, or even to make one by fractionation, it is practically valueless.

The third test—that of the optical rotation of the otto—appears, at first sight, to be a very severe one, the range being rather narrow—namely, -2.3° to -2.7° [this and all following determinations were made in a 100 mm tube at 25° C. (75° F.)]. To find the possibilities of this test, the rotation was taken of a sample of geranium oil from stock. It was found to be -9.9° . Now, if we take otto at -2.3 , and work it out by alligation, we find that we can add 4 parts of this geranium oil to 72 parts of otto, of a rotating power of -2.3 to reach the limit of -2.7 degrees, thus:—

	27	
23		99
72		4

This is equal to 5.5 per cent. of geranium oil, and of the three tests it is the sharpest, but, unfortunately, we cannot even trust to it. The optical rotation of an essential oil can readily be altered by admixture with some other oil, or constituent of an oil, having opposite rotation. For instance, in this case 5 per cent. of citrene, added to this geranium oil, reduced the rotation from -9.9° to -2.6° . This citrene was obtained in making citral, and possessed very little odour, so that it would not be possible to detect it by the nose, or by our present knowledge of physical and chemical tests. The author summed up the three physical tests as follows:—

The freezing-point of 65° to 68° F. allows of 11 per cent. admixture of geranium oil.

The specific gravity test at 83° F., ranging from .850 to .856, allows of 15.8 per cent. admixture of geranium oil.

The optical rotation-test of -2.3° to -2.7° allows of 5.5 per cent. admixture of geranium oil, or with an unlimited amount if the rotation figures of the oil be rectified by the addition of 5 per cent. of citrene, as above described.

From these facts it is evident that these physical tests are

useless for practical purposes. Unfortunately, the author knows of no chemical tests that are better, and he therefore feels compelled to fall back on the old way of using one's sense of smell. The best way to do this, he thinks, is to dissolve one drop of otto in about twenty drops of rectified spirit. Pour this into 1 oz of warm water (about 100° F.), and shake up well. In this way one gets the best chance of noticing foreign oil in the otto, especially if compared with the best standard sample obtainable, treated similarly. By this process a sharp nose will readily detect an admixture of 5 per cent. of geranium oil in otto of rose.

DISCUSSION.

Mr. T. S. WOKES regretted that there was no definite test for otto. He had found, in buying from some importers, that the quality was simply a question of price, as they admitted that it could be sophisticated with oil of geranium to any extent desired.

Dr. SYMES complimented Mr. Conroy on his interesting and valuable papers. Many years ago Dr. Gladstone found that the sp. gr. of pure otto was 0.881. He noted also that Hanbury and Flückiger stated that the rotatory power of pure otto was $+4^{\circ}$, and that they also found the proportion of stearoptene varied with the district from which it had come; the roses grown in northern districts yielding more stearoptene than those grown in the south. One method of adulteration was the addition of spermaceti to produce the appearance of stearoptene and raise the melting-point, but this was a clumsy process. He was inclined to agree with Mr. Conroy that there was no definite test, but he was somewhat in favour of the optical test. He would like to know if Mr. Conroy had examined the refractive index of the otto. The presence of such an article as citrene upon the market was unfortunate. He knew for a fact that large quantities of it were shipped to the countries producing essence of lemon, and it was practically impossible to detect its presence in that oil.

Mr. HAROLD WYATT, jun., said that he had tried the proposed test of adding magenta to sulphurous acid, and when the solution was colourless adding the suspected otto; if adulterated the colour returned, but if pure it remained clear. This was Panajacow's test for geranium oil, but he found that it was not at all reliable, as the same results were obtainable with sandal and cedar oil, and even castor oil, if time were allowed. To his mind the best test was the nose.

Mr. McCAIG said that he was surprised at the results shown by Mr. Conroy. He would like to know what Mr. Conroy thought of the chemical tests—as, for example, the nitric-acid test.

Mr. CONROY, in acknowledging the vote of thanks, said that he had not tried the refractive index, but he would do so and report the result. He agreed with Dr. Symes that the presence of an article like citrene on the market was most unfortunate. As a by-product it was necessarily very cheap, and constituted an adulterant very difficult to detect. He had examined and tried the chemical tests to which Mr. McCaig referred, and all were unsatisfactory. He did not know any better tests than those with which he had dealt, and as shown they were worth very little.

The last paper was by Mr. J. T. HORNBLOWER on

A NOVEL ADULTERANT OF MUSK.

The constituents of a great many musk-pods may be classed under two heads—"Normal" and "Abnormal." The former one would call "musk"—whatever that may be—and the latter would go by the name of "adulterations." As "adulterations," Pereira mentions blood reduced to coarse powder; the liver or spleen similarly treated, dried gall, and a particular part of the apricot-tree bark. The author had never come across any of these, but he had many times met with cat skin, hair, paper, and small lumps and bars of lead. Recently, on rubbing down the contents of some pods with S.V.R., he noticed that a heavy sediment, like dark-red sand, was left behind when the mortar was emptied. On rubbing it again in the mortar the colour changed to a bright scarlet or a "vermilion" colour. On examining this it was found to be metallic "cinibar," either native or prepared. Mercury was obtained from it, and the sulphide radicle proved.

Votes of thanks were passed to all the authors.

HALIFAX AND DISTRICT CHEMISTS' ASSOCIATION.

A LARGE meeting of this Association was held on November 19, when arrangements were made for the coming year. The following officers were elected:—President, Mr. J. B. Brierley; Vice-Presidents, Messrs. G. M. Cott, W. C. Hebden, J. Swire, and Jonathan Pollard; Hon. Treasurer, the President; Hon. Secretary and Librarian, Herbert W. Seely; Committee, Messrs. Tiffany, Tom Briggs, J. Patchett, C. Cocker, C. Fielding, W. S. Thompson, and Haigh. The yearly subscription is 5s, which includes ticket for the supper, to be held on December 9. The subsequent meetings will be held quarterly, or oftener, as the committee may decide.

GLASGOW AND WEST OF SCOTLAND PHARMACEUTICAL ASSOCIATION.

At the meeting held on November 22, Mr. W. L. Currie in the chair, Mr. ALEXANDER LAING read a paper on

THE RELATION OF MEDICINE TO PHARMACY.

Commencing in a somewhat polemical fashion with definitions of medical man and pharmacist and their respective departments of medicine, the author proceeded to speak of the old days when people swore by "Buchan," and of these later times when quack advertisements are their medical guide. He then spoke of the position of pharmacy, humorously referring to a contemporary's efforts to get the drug-trade to see through its spectacles. Medicine next came under his review, but he did not see much progress in it since the good old days when they blistered and bled. Surgery is honest, however, to the interests of humanity, and as an afterthought he admitted that within recent times medicine had made very remarkable progress. The tide in its affairs was now at the flood, and led on to fortune for manufacturers of new artificial alkaloids, apt combinations of the older salts, and anything new of a "taking" appearance in the way of drugs. Medical men were seemingly so exhausted by the difficult and arduous work undergone in diagnosing the case that they were incapable of devising a prescription, and ordered some ready-prepared nostrum with a nice-sounding name sent out broadcast by the great drug-houses. That was the relation of medicine to pharmacy in these palmy days of scientific light and leading. There would shortly be a new edition of the British Pharmacopœia. Poor belated Pharmacopœia! In connection with that work, it was strongly impressed upon him that the medical faculty would resent any mere pharmacists—chemists or druggists—making suggestions on the making or taking of drugs; but an enterprising drug-house, or even an individual pharmacist, had only to send a representative with demonstrative samples, or a descriptive pamphlet, and the scientific medical practitioner resented it by trying the effect on his patients at the earliest opportunity. The therapeutic effects were not due to the contents of the mixture, whatever it might contain, but to some wonderful efficacy in the name of the maker. It was marvellous! It was also of great assistance in fostering the sale of patent medicines, for the public were not very discriminating, and took impressions to suit themselves; and yet they heard of complaints from medical men in regard to the use or abuse of patent medicines. Their duty as pharmacists was to second the labours of the physician by giving out what he chose to prescribe. That kind of progress in medicine he did not like. The medical faculty had no control over the preparation of these things, no definite knowledge of their composition, and they could not ensure their supply. Would it not be in the interest of scientific progress to give over to the hands of the recognised body of pharmacists the devising of standard formulæ, so that a British Pharmacopœia of living value, instead of a dead-letter one, might be compiled? There was no need of a Pharmaceutical Society if wholesale drug-houses and artificial chemical manufacturers were to dominate the prescribing powers of physicians.

DISCUSSION.

Mr. DAVID WATSON said that pharmacy had advanced with the times, and whatever might be said against manufactured preparations, they should bear in mind that the

reputation of certain firms had been obtained just in the same fashion that modern firms obtain reputation.

Mr. A. MCKELLAR said there was a good deal of "faking" in the medical profession. Doctors got their therapeutics from advertisements, and knew very little pharmacy, for they were taught little. He thought that medicine and pharmacy were becoming more estranged every year.

Mr. JAMES MOIR said that as far as Glasgow was concerned it did not very much matter what the Glasgow chemist turned out; supposing it were 100 per cent. better than the advertised one, unless it came from London or some other place at a distance, medical men would not have it.

Mr. DUNLOP said the older members of the medical profession knew that they were students of the Pharmacopœia. It was the modern medical practitioner who had no knowledge of pharmacy, and gave them the factory articles to dispense.

Mr. J. H. HOSEASON remarked that Mr. Laing was scarcely correct in saying that pharmacists had not been recognised in compiling the Pharmacopœia. He knew that the Pharmacopœia was in very good hands, and the opinion of pharmacists was taken always *pro tanto*. In the new Pharmacopœia they would have a very much better article than they had at the present time. After referring to new remedies and their rightful place in *materia medica*, Mr. Hoseason, as an old teacher of medical students, agreed that they learnt too little pharmacy, but that work was thoroughly done in the Victoria University, and he thought that other educational institutions would follow that lead.

Mr. J. ANDERSON RUSSELL remarked that the General Medical Council should take a little notice of druggists' new preparations coming into the market, and not wait till a new Pharmacopœia, but join with the Pharmaceutical Society in giving them the entire collection of formulæ which were coming into general use.

Mr. CURRIE then wound up the discussion, saying that he had no objection to anyone using his brains for pharmaceutical improvements, but he abhorred those terrible lists of combinations which were foisted upon medical men and the public. As an instance of the ridiculous extent to which proprietary-prescribing went, he mentioned quite a simple suppository of special make, which could not be got in town, but which could easily have been made in any good pharmacy; and he had dispensed what he made himself without, he thought, a breach of etiquette. Such prescriptions were often written by medical men without thought, but there was also want of knowledge, and he was confident that five-sixths of the medical men who were created each year knew no more when they were "capped" than they did when they entered; they had no idea of the combination of the drugs, or of what they were ordering. He suggested that a correspondence on the condition of pharmacy should be set a-going, either in the newspapers or the medical journals, such as the *Lancet*. If that was done, he believed they would get the valuable support of many members of the medical profession.

PHARMACEUTICAL CHEMISTS' AND APOTHECARIES' ASSISTANTS' ASSOCIATION OF IRELAND.

THE annual meeting of this Association was held at the Pharmaceutical Society's House, Dublin, on November 20, Mr. Alister, M.P.S.I. (President), in the chair. After a few pleasant remarks Mr. ALISTER vacated the chair, which was taken for the evening by Mr. G. G. Fetherston. Mr. HARDY (Hon. Secretary) read the annual report, which stated that the Association dated its existence from a meeting of chemists' assistants held in Dublin on July 24, 1895, and the papers contributed were referred to in very complimentary terms, the one by Professor Falkner on the "History of Pharmacy" being selected for special mention. The members now numbered upwards of a hundred, and the committee saw no reason why it should not far exceed that number. It was hoped that the new committee would leave nothing undone to place the Association in such a position as will put it far in advance of any kindred association in the United Kingdom.

Mr. J. TYRRE TURNER submitted the Treasurer's report, which showed that the financial position of the Association was generally satisfactory. A profit of 5% had accrued from

the recent smoking-concert, and, after paying all dues and demands, the sum of 8*l.* 3*s.* 2*d.* remained to the credit of the Association.

The report and statement of accounts having been adopted, the election of officers was taken and resulted as follows:—President, Mr. W. McCarthy, M.P.S.I.; Vice-President, Mr. W. J. Hardy, L.P.S.I.; Hon. Treasurer, Mr. J. Tyrie Turner, L.P.S.I.; Hon. Secretary, Mr. David O'Sullivan, L.P.S.I.; Hon. Assistant Secretary, Mr. H. Hunt, L.P.S.I.; Committee, Messrs. Smith, Savage, Johnston, Wilken, Ashe, Harris, Ardle, Taylor, Campbell, Alister, McManus, Barrett, Watson, Nagle, Hegarty, Parker, Salisbury, Danwoody, Corcoran, and Walsh.

Legal Reports.

COUNTY COURT CASES.

A CHEMIST AND HIS LABELS.

IN the City of London Court, on November 21, before Mr. Commissioner Kerr and a jury, the case of *Defries v. Sykes*, which has been mentioned previously in the *C. & D.*, was disposed of. Mr. Nathan Defries, 18 Barbican, E.C., sought to recover 4*l.* 8*s.* 5*d.* from Mr. J. S. Sykes, chemist, 75 High Street, Plumstead, for printing 25,000 labels for the defendant's "Bath Salt." Mr. Samuel Moses, Plaintiff's counsel, explained that the order was given by the defendant, in April last. A proof of the labels was sent to the defendant, who approved it; but he afterwards complained that the colour had faded. The defendant had failed to include on the labels the price at which he sold the Bath Salt, and that seemed to be one of the reasons why he now refused to pay the account. The plaintiff's traveller proved taking the order. Mr. Commissioner Kerr said the defendant had sent to him a quantity of papers relating to the dispute. He would hand them all back to the defendant, adding, "We are obliged to receive a great quantity of stuff here from time to time." (Laughter) The defendant said the reason he objected to pay was because the ink printed on the labels was not of the right colour. The plaintiff assured him that the labels would be printed with an ink that would not fade. Mr. Defries, in reply, said there was no colour in the world which, after it had been exposed to the sun and light, would not fade, especially as the defendant had placed salt near the labels. The defendant said he wanted the ink to be a bronze-blue, the same as the plaintiff had used on one of his own calendars, and which had not faded, although it had been hung up in his shop during the whole of this year. The boxes round which the labels had been placed were of no use at all to him now. They were all unsaleable. He had photographed the whole lot of them in his shop, and he produced the photographs for the inspection of the jury. The loss to him had been very great. He had to communicate with his customers. Mr. Commissioner Kerr said that what the defendant told his customers was not evidence. The defendant added that he had three letters from experts stating that the bronze-blue colour which he wanted was a definite colour. The jury stopped the case and found for the plaintiff. Mr. Moses asked that the fee to counsel should be allowed as the defendant had put them to a great deal of trouble in the matter. Mr. Commissioner Kerr, in disallowing the fee, observed: "Never give any credit for the rest of your life to anybody, and then you will never have any trouble!"

CHEMICAL-MANURE SHOWCARDS.

IN the City of London Court, on November 21, Messrs. Thoburn & Co., St. Bride Street, E.C., sued Mr. Walter Freir, of 115 Fleet Street, E.C., to recover the sum of 28*l.* 3*s.* for printing certain chemical-manure showcards. The defendant's main objection to paying the account was that the plaintiffs did not supply the showcards in time as stipulated. The defendant counterclaimed for damages which he said he had sustained through the showcards not only being late in arrival, but also because they were not in accordance with the conditions specified. Mr. Commissioner Kerr went into the matter at some length, and eventually judgment was

entered for the amount claimed less 12*l.*, which had been paid into court. The defendant's counter claim was reserved.

BEECHAM v. DEWHURST.

IN the Chancery Division of the High Court, on November 20, before Mr. Justice Chitty, the case of *Beecham v. Dewhurst* came on for hearing on a motion to restrain the defendant, trading as the Public Benefit Drug Company, of Scotland Road, Liverpool, from passing off spurious pills as Beecham's pills. Mr. Martelli, who appeared in support of the motion, said the defendant now appeared, and consented to a perpetual injunction, paying an agreed sum as costs. His Lordship ordered accordingly.

LIEBIG'S EXTRACT OF MEAT.

IN the Court of Appeal on Friday last, before the Lord Chief Justice of England and Lords Justices Lindley and A. L. Smith, the case of *Liebig's Extract of Meat Company (Limited) v. the Chemists' Co-operative Society (Limited)* and *Liebig's Medicated-wine Company (Limited)* came on for hearing, on appeal by the defendants from an order of Mr. Justice Kekewich, who had granted an injunction restraining them from selling their extract of meat in such a manner as not to clearly distinguish between it and the extract manufactured by the plaintiffs.

Mr. Bramwell Davis, Q.C. (with whom was Mr. Martelli), appeared in support of the appeal, and said that the only part of the order of the learned Judge appealed from was that relating to the wrappers. He should argue there was no resemblance between the plaintiffs' wrappers and those used by his clients, who had no intention of deceiving.

The Lord Chief Justice said it was perfectly easy to make a distinction between the wrappers if the defendants did not want to deceive.

Mr. Bramwell Davis said the difficulty was that the defendants had used these wrappers for years. Anybody was at liberty to manufacture Liebig's Extract, and there were, in fact, many manufactures sold under that name.

Their Lordships, without calling on the other side, dismissed the appeal with costs, the Lord Chief Justice observing that, in his opinion, the wrappers used by the defendants were calculated to lead the public to believe they were buying goods of the plaintiffs' manufacture. If the defendants had nothing but an honest intention in selling their goods, it would be easy for them to adopt means to enable persons to clearly distinguish between the two manufactures.

TOMATO SAUCE LEADS TO A LIBEL ACTION.

ON Tuesday, in the Queen's Bench Division, before Mr. Justice Cave and a special jury, the hearing was concluded of the case of *Sharwood & Co. v. Gordon & Dilworth (Limited)* and another, which had been commenced on the previous day. The plaintiffs, who are wholesale grocers, claimed damages for an alleged libel on them in their trade as sellers of tomato ketchup and otherwise, and for an injunction. Defendants pleaded justification, and stated that the words complained of were true in substance and in fact. Sir E. Clarke, Q.C., M.P., and Mr. Israel Davis were counsel for the plaintiffs; while Mr. Jelf, Q.C., Mr. Rufus Isaacs, and Mr. Cartmell represented the defendants. The case for the plaintiffs was that in 1894 they became agents in this country of Messrs. Soper & Co., of New York, for the sale of tomato ketchup. They supplied Messrs. Leverett & Frye and other firms. The defendant company wrote to Messrs. Leverett & Frye requiring them to discontinue the sale of plaintiffs' speciality on the ground that the defendants had registered "tomato catsup" as part of their trade-mark, and that the plaintiffs had put on the market a rival sauce, which was contained in bottles of such a shape and description as to be calculated to deceive the public and lead them to believe they were purchasing defendants' tomato catsup. The defendants alleged that the plaintiffs' article had been designedly prepared in the way it had for the express purpose of colourably imitating defendants' article. This allegation constituted the libel. The case for the plaintiffs

was that their bottles, labels, and get-up differed so essentially from defendants that there was no possibility of mistaking one for the other. The case for the defendant company was that they had practically introduced tomato catsup on the English market, and in doing so had spent very considerable sums of money. Their speciality known as "tomato catsup" was bottled in a bottle which had become identified with their name, but this had been so closely copied by the plaintiffs that purchasers would be led to believe that in buying Sharwood & Co.'s tomato ketchup they were buying the goods of the defendant company—a fact which must have been well known to the plaintiffs, who formerly dealt with the defendant. Mr. Blackwell (Crosse & Blackwell) and the manager of John Moir & Son (Limited) were among the witnesses in support of the defendants' plea. In the result the jury returned a verdict for the plaintiffs, and assessed the damages at 50%. Judgment accordingly.

SALE OF FOOD AND DRUGS ACT.

PAREGORIC.

AT Cerigyrdrnidion Petty Sessions last week, Mr. W. P. Morris, grocer, Cerigyrdruidion, was summoned for selling adulterated paregoric. It was stated in evidence that on October 15 an officer purchased at defendant's shop 6 oz. of paregoric. The paregoric supplied contained no opium. This being the first case of the kind, the police did not press for a heavy penalty. Fined 5s. and costs.

Bankruptcies and Failures.

Re SIDNEY EDDLES JOHNSON, 30 Mark Lane, E.C., and Rainham, Essex (trading as Miller & Johnson), Chemical-mannre Manufacturer.

THIS debtor was examined at the London Bankruptcy Court last week upon accounts showing gross liabilities 13,621*l.* 1*s.* 5*d.* (unsecured, 9,208*l.* 3*s.* 1*d.*), and assets 2,350*l.* 3*s.* 5*d.*

Replying to the Official Receiver, the debtor stated that in December, 1883, he purchased the business from the trustees of his father's estate for 600*l.* or 700*l.* In addition to the amount paid to the trustees, he abandoned a claim of about 5,000*l.* that he had against his father's estate. As capital he had 1,200*l.* that he had received as dividends from the same estate. His failure was principally due to interest charged on borrowed money and on a mortgage of the works, to bad trade, and to excess of expenses over income. He realised his insolvent position only in September last, when the July balance-sheet was handed to him. That sheet showed a deficiency of 550*l.*, but all the previous sheets had shown a surplus. The business had declined since 1892. The accounts in the bankruptcy showed that the surplus had turned into a large deficiency, a sum of 5,220*l.* having been allowed for depreciation, the difference being accounted for by in one case taking the works as a going concern, and in the other at a break-up valuation.

In reply to Mr. Hansell, who appeared on his behalf, the debtor stated that the business was started by his father in 1855. The works and plant cost between 23,000*l.* and 24,000*l.* The value had depreciated in the ordinary course, but the figure appearing in the statement of affairs simply represented the breaking-up price. In addition to his wife and children he had supported various members of his family, and had been put to considerable expense by sickness and death.

The examination was ordered to be concluded.

Re ERNEST SILAS BARLOW, King Street, Oldham, Chemist and Druggist.

THE examination of this bankrupt took place at the Oldham Bankruptcy Court on November 20. Replying to the Official Receiver, the debtor said he was brought up as a chemist and druggist, and commenced business on his own account at 109 Oxford Street, Wernath, with 100*l.* of borrowed capital, which he had since repaid. He com-

menced the business in King Street in May, 1884, and carried on both businesses until 1888, when he sold the Oxford Street business for 100*l.* His father-in-law found 400*l.* for the King Street business, and he paid 375*l.* to the outgoing tenant, and the remainder of the 400*l.* for law expenses and the valuation. His turnover at King Street was at first about 400*l.* a year, and he increased it to about 700*l.*, and his net profits were 20 per cent. The business began to decrease seven or eight years ago, when he was attacked with influenza. He was ill for six months in every year since. He kept a cash-book, receipt-book, ledger, and rough day-book, but he had never made out a balance-sheet showing his profit or loss. It was not the custom of the trade to do so. Official Receiver: All good business men balance their books, and try to ascertain how they stand. The debtor, continuing, said he had never taken stock, and sickness and trade competition were the causes of his failure. He did no dispensing, but he did a little wholesale business. His wife had a separate income of 200*l.* a year since the death of her father, four years ago, which she used for charitable purposes. Official Receiver: Did you tell her you were in debt? Debtor: I said we could not afford to help other people so well when we were in debt ourselves. Official Receiver: It has been said by more than one of your creditors that you grossly neglected the business. The Debtor: It is not true. There was a meeting of my creditors on October 13 in Manchester. I suggested a deed of assignment, but the creditors would not agree to it, and said I must go into bankruptcy. Official Receiver: You have seventy-three creditors. Debtor: We did a variety of trade. Official Receiver: Is it necessary for a chemist and druggist to deal with even fifty different people? Debtor: Almost so. Official Receiver: Cannot you do all you require with about half-a-dozen firms? Debtor: I cannot; the goods are so various. Official Receiver: How many are sufficient? Debtor: I think thirty-five. Official Receiver: Is it not a fact that many of the debts you are owing to-day are your first transactions with a good many of the creditors? Debtor: I do not think so. The debtor had stated that the net profit from carrying on the business from October 4, 1893, to the date of the receiving order, after deducting the usual trade expenses, was 80*l.* 16*s.* 7*d.*, and he estimated his stock at 262*l.* 4*s.* The Official Receiver said he had been told on good authority that it would not realise 50%. The examination was adjourned to December 11, the debtor in the meantime to prepare a cash account, and show the amount of goods bought and sold during the last twelve months. In answer to a creditor, the debtor said his father-in-law's executors would not allow his wife to do anything for the creditors.

Re ALFRED WATTS, Lower Halling, near Rochester, Druggist.

THE liabilities in this failure are 331*l.* 6*s.* 7*d.*, assets 11*l.*, which sum was deposited with the solicitor for the cost of the petition. The insolvency is attributed to borrowing money, at the rate of 60 per cent interest, from a money-lender, who, after 25*l.* had been paid back, threatened to realise on the bill of sale if the whole amount was not at once paid. The debtor's public examination was held at the Rochester Bankruptcy Court on November 16. In reply to the Official Receiver, the debtor stated that he commenced business eleven years ago with a capital of 100*l.*, half of which belonged to his wife. The business now belonged to Mr. Geo. Browning, to whom it was assigned, and it was now being managed for Mr. Browning by his wife. He had offered his creditors 1*s.* in the pound, but that offer had been refused. He had struggled on with the hope of pulling himself round, but he found it impossible to do so. A bill of sale, in which everything possessed by debtor was included, was given to Mr. Cuckney, who had advanced him 33*l.* The examination was adjourned.

Under this failure the following are creditors:—

					£	s.	d.
Dabner, Wm., Barham ..	..	..	..	..	50	0	0
Kimmins, Chatham ..	..	..	..	..	103	0	0
Palmer & Freeland, Snoddland ..	..	..	..	..	36	0	0
Spiller & Baker, Rochester ..	..	..	..	..	44	0	0
Wilson, Loose, near Maidstone ..	..	..	..	..	16	0	0

Re NAYLOR, SMITH & CO., Eureka Works, Syren Street, Bankhall, Liverpool, Manufacturing Chemists.

THE liabilities to unsecured creditors in this case amount to 3,129*l.* 10*s.* 5*d.*, to fully secured creditors 128*l.*, and established value of securities 2,038*l.*; surplus of 1,970*l.* carried to contra. The assets, including the 1,970*l.* before mentioned, are estimated at 2,009*l.*, less 191*l.* 10*s.* for preferential claims. Mr. George Henry Naylor alleges the cause of failure "insufficient capital." The Official Receiver states that Mr. Wm. Horatio Smith, whose name appears in the firm name, contends that he was only the manager and not a partner. Mr. Naylor practically admits this, but states that Mr. Smith ordered all the goods and machinery that were required, and that he (Mr. Naylor) had nothing to do with the business except to supply the funds required. The business intended to be carried on was that of extracting stearine, wax oleo, and other by-products for mucilage or cotton-seed foots. Mr. Naylor says that Mr. Smith assured him that the plant required would not cost more than 650*l.*, and that the balance of the 1,000*l.* would be sufficient for working capital. Mr. Naylor states that over 5,000*l.* has been expended in connection with the plant and business; 2,000*l.* of this sum he has found himself, and he now owes 3,129*l.* 10*s.* 5*d.* to unsecured creditors. Mr. Naylor states that the manufacturing did not commence until December, 1895, and that the works were only carried on for a few months.

Re EBENEZER BOWEN, Pontardulais, Carmarthenshire, Chemist, Druggist, &c.

THE statement of affairs filed under this failure shows net liabilities 1,238*l.* 17*s.* 11*d.*; and assets, consisting of cash at bankers 14*s.* 3*d.*, cash in hand 3*l.*, stock-in-trade (cost 141*l.* 4*s.* 1*d.*) 84*l.* 14*s.* 6*d.*, trade fixtures, fittings, &c. 37*l.* 14*s.* 6*d.*, furniture 70*l.* 1*s.* 6*d.*, other property 4*l.*, book-debts 212*l.* 3*s.*, estimated to produce 65*l.* 8*s.* 5*d.*, making 265*l.* 13*s.* 2*d.*, less 54*l.* 2*s.* for preferential claims, which leaves 211*l.* 11*s.* 2*d.*, or a deficiency of 1,027*l.* 6*s.* 9*d.* Causes of failure as alleged by debtor: "Depression of trade, heavy interest on borrowed money, and legal expenses on writs," &c. The Official Receiver states that the receiving order was made upon the debtor's petition. He states that he started business on January 1, 1879, as a chemist and druggist, in his present shop with a capital of 100*l.* In 1884 he took the Red Lion Hotel adjoining, having at that time a capital of about 500*l.* On November 16, 1889, he obtained a patent for "improvements in or connected with the manufacture or production of ammoniacal salts," and sold the patent to Bowen's Patent Manure Company (Limited). He is unable to give the terms of the purchase by the company, the number of shares he held, or the terms of his engagement as manager by the company. The debtor was at considerable expense in carrying on experiments before the formation of the company, and during the time he acted as manager he states he received no salary, but paid wages and other expenses out of his own pocket. Afterwards an arrangement was come to whereby he rented the works from the company, and carried on the business himself. The company was subsequently wound up under voluntary liquidation, but the debtor can give but little information in regard to such winding up. He estimated that he has lost, in connection with the patent, fully 500*l.* Beyond a customers' ledger, he has kept no record of his financial transactions. He admits that he has been aware of his insolvency for the last twelve months. The creditors treated as partly secured are a local firm of brewers, who hold a policy of insurance for 1,000*l.*, effected in April, 1894, payable at sixty years or death, annual premium, 79*l.* 15*s.* A portion of the household furniture, valued at 10*l.*, is claimed by debtor's daughter, as having been given to her by a lodger at the hotel. At the date of the receiving order an execution for 70*l.* and costs had been levied upon debtor's effects, but has since been stayed. The deficiency account submitted by the debtor showed that he had lost by Bowen's Patent Manure Company to October, 1891, 500*l.*, and that the net profit from the chemist's business from October, 1891, to October, 1896, averaged 80*l.* per annum.

The following are creditors:—

	£	s.	d.
Barron, Harveys & Co., London	23	2	0
Battle, Maltby & Bower, Lincoln	16	13	0
Jenkins John, Carmarthen	68	0	0
Kiloh, E. P., London	50	0	0
Legerton, Alfred, London	37	8	8
Lewis, Mrs. Thomas, Pontardulais	10	0	0
Mackenzie & Co., Bristol	11	15	6
Prickard, Henry, & Co. (Limited), Bristol ..	10	17	11

Partly Secured Creditor.

Buckley Brewery (Limited), Llanelly	650	0	0
(Estimated value of security, 83 <i>l.</i>)			

Contingent or other Liabilities.

Evaus, Mrs. Ann (deceased), Exors. of, Llandysul	120	0	0
Griffiths, Dr. W. O., Pontardulais	110	0	0
Preferential Creditors	54	2	0
Usher, William, Swansea	65	0	0

Re G. F. SHARPE, Ottery St. Mary, South Devon, late Toilet-brush Manufacturer.

AT the London Bankruptcy Court on November 24, the public examination of this bankrupt was taken. He had a London office at 57 and 58 Chancery Lane as an architect and surveyor. The accounts filed show liabilities 882*l.* 13*s.* 6*d.*, and assets 350*l.*

In the course of his evidence the bankrupt stated that in September, 1895, he with two others purchased the business of a toilet-brush manufacturer at Ottery St. Mary. Each partner contributed 150*l.*, witness's share being lent to him by one of his partners, who has since been appointed receiver of his (bankrupt's) interest in the business. He attributed his appearance at the court to loss in connection with a building estate that he had purchased for 2,200*l.* at Mortlake.

The examination was concluded.

Gazette.

PARTNERSHIPS DISSOLVED.

- Hall, S. J., and Jones, W. T., under the style of the Caldico Color Company, colour manufacturers, Caldico, near Chepstow.
- Hill, W., and Prentis, E. J., under the style of the County Chemical Company, Colleshill, manufacturers and sellers of specialities in bicycle-oils, polishes, &c.
- Savege, J., and Marshall, J. C., under the style of Savage and Marshall, Kingston-upon-Hall, surgeons and general medical practitioners.
- Smith, R. A., and Evans, C. H., under the style of Smith & Evans, Norwood Road, and elsewhere at West Norwood, physicians and surgeons.
- Tucker, A. E., and Hughes, T. V., under the style of Tucker & Hughes, Birmingham, assayers and public analysts and chemists.

THE BANKRUPTCY ACTS, 1833 AND 1890.

ADJUDICATIONS.

- Tattersfield, Edward, Mirfield, soap-manufacturer's assistant.
- Tattersfield, Robert, Mirfield and Ravensthorpe, soap-manufacturer and dyer.

ORDER MADE ON APPLICATION FOR DISCHARGE.

- Gough, Charles Henry (trading as C. H. Gough & Co.), Leeds, leather-split manufacturer—discharge suspended for two years and six months, ending April 15, 1899.

"WHEN FOUND, MAKE A NOTE OF."—There are several German firms in the cities on the Coast of Morocco whose principal business has been derived from British agencies in their hands. Their profits they employ in importing German goods. They have clerks who, after a time, start business on their own account, and obtain other British agencies. I question the wisdom and patriotism of British business abroad being entrusted to foreign houses, and I doubt if in Morocco it is profitable to the British firms, for the seed of German business in the Morocco ports consisted of British agencies in German hands.—(Consul Allan Maclean's Report from Dar-al-Baida, Morocco).

New Companies and Company News.

PITTMAN PAINT COMPANY (LIMITED)—Capital 10,000*l.*, in 1*l.* shares. Objects: To acquire the business of Thomas Pittman, oil, colour, paint, and varnish manufacturer.

JOHN CURTIS & CO. (LIMITED)—Capital 40,000*l.*, in 10*l.* shares. Objects: To acquire the business of John Curtis seed-crusher and oilcake-manufacturer. Registered office, Redcliffe Crown Oil Mills, St. Philip's, Bristol.

J. T. KNIGHT & CO. (LIMITED)—Capital 5,000*l.*, in 1*l.* shares. Objects: To acquire the business of saccharum and caramel manufacturers carried on by Joseph T. Knight and John Templeton, at West Street, Bedminster, Bristol, as "J. T. Knight & Co."

WHITMORE DENTAL COMPANY (LIMITED)—Capital 300*l.*, in 1*l.* shares. Objects: To acquire, take over as a going concern, and carry on the business of artificial-teeth manufacturer now carried on by Louisa Whitmore at Hawley, Staffordshire. Registered without articles of association.

MOULTON'S SOAP WORKS (LIMITED)—Capital, 50,000*l.*, in 1*l.* shares. Objects: To acquire and take over as a going concern the business of soap, blue, and candle manufacturers, and oil and tallow refiners, now carried on at the Soho Mills, Macclesfield, Cheshire, by G. J. Moulton & Co. (Limited); to enter into an agreement with Ben Fox; and to carry on the business of soap, oil, wax, candle, match, blue, blacking, blacklead, starch, and pickle manufacturers, and manufacturers of and dealers in extracts, essences, perfumery, paints, varnishes, inks, gums, dyes, chemicals, insecticides, disinfectants, &c.

BOVRIL (BRITISH, FOREIGN AND COLONIAL) (LIMITED).—Capital 2,000,000*l.*, in 500,000 5*l.* 10*s.* per cent. cumulative preference, 750,000 ordinary and 750,000 deferred shares of 1*l.* each. Objects: To acquire and take over as a going concern the undertaking and all or any of the assets and liabilities of Bovril (Limited), to enter into an agreement dated November 18 between Ernest T. Hooley of the one part and Robert Doncaster (for the company) of the other part, and to carry on the business of manufacturers, merchants, exporters and importers of meat foods, extracts and products, and animal, vegetable, and other substances, farmers, stockbreeders, graziers, meat-preservers and ship-owners. The first directors (to number not fewer than three nor more than nine) are Right Hon. Lord Playfair, J. L. Johnston, Viscount Duncannon, Sir E. Commerell, V.C., F. Gordon, R. Farquharson, G. L. Johnston, and A. Walker. Qualification 1,000*l.*. Remuneration 500*l.* each per annum and an extra 1,000*l.* for the chairman.

PRODUCTS DISTRIBUTION COMPANY (LIMITED).—Registered November 18 with a capital of 5,000*l.*, in 1*l.* shares. Objects: To carry on the business of introducers and importers into this country of foreign products which are unknown or slightly or insufficiently known, and which may possibly have some commercial, scientific or educational value. The first subscribers (each with one share) are:—Arthur Robottom, Commercial Sale Rooms, Mincing Lane, E.C., merchant; James Roberts, 10 Bush Lane, E.C., accountant; Thomas L. I. Moncrieff, 9 Bush Lane, E.C., gentleman; Horace Baker, 6 Market Buildings, Mincing Lane, E.C., merchant; Alfred J. Lodge, 24 Upper Gloucester Place, N.W., gentleman; Alfred A. Brown, 65 Skelton Road, Forest Gate, E., clerk; H. Webb, The Cottage, Upper Coombe Street, Croydon, cashier. The first directors are:—Arthur Robottom (Managing Director), Horace Baker and Thomas L. I. Moncrieff. Qualification, 50 shares. Remuneration of the directors (including the managing director, and apart from any other special payment agreed to be made to him), 100*l.* per annum, and one-half of the net profits after 10 per cent has been paid, the same to be divided between them. Registered office, 6 Market Buildings, Mincing Lane, E.C.

CARTER'S LITTLE LIVER-PILLS.—We learn that the negotiations for the conversion of this business into a million-pound company are still proceeding.

ABERDEEN AERATED WATER COMPANY (LIMITED).—Resolved November 9: "That the company be wound up." George McBain, jun., Aberdeen, chartered accountant, liquidator.

ESSENTIAL OILS COMPANY (LIMITED).—Resolved October 23, confirmed November 13 (at 45 and 46 Leadenhall Street): "That the company be wound up." Arthur B. Haxell, liquidator.

ELECTROLYTIC RESEARCH SYNDICATE (LIMITED).—Resolved October 20, confirmed November 6: "That the syndicate be wound up." F. E. Wright, 11 Victoria Street, Westminster, liquidator.

BOVRIL (BRITISH, FOREIGN AND COLONIAL) (LIMITED).—We were informed at the Bovril office, before the time for closing the application-list, that the shares in this new company had been then more than fully subscribed.

PATERSON'S CHEMICAL MANUFACTURING COMPANY (LIMITED).—Meeting to be held at John Mann, jun.'s, 188 St Vincent Street, Glasgow, chartered accountant, December 21, at 11, for an account of the winding-up.

LEWIS & BURROWS (LIMITED).—Mr. L. Byron Peters has resigned his position as chairman of Lewis & Burrows's Drug-stores (Limited). The registered offices of the company have been transferred from 2 Backnall Street to 22 and 24 Great Portland Street, W.

BELFAST MINERAL WATER COMPANY (LIMITED).—At the annual meeting of this company on November 18 a dividend was declared at the rate of 12½ per cent per annum, 4,000*l.* placed to the reserve fund, and 1,077*l.* carried forward to next year's account.

BOOTS (LIMITED).—The directors of Boots (Limited), chemists, druggists, and mineral-water manufacturers, have sent out their report and balance-sheet for the past twelve months. It states that eleven new branches were added during the year, making sixty-two now open, and several more are in process of building or fitting out. The reserve fund (including the 1,200*l.* which it is proposed to appropriate from the profits of the year and other additions since September 30, 1896) has now accumulated to over 20,000*l.* The profit-and-loss account shows a net trading profit of 10,811*l.* 13*s.* for the year (against 9,251*l.* 19*s.* 5*d.* last year), and, added to 851*l.* 8*s.* 2*d.*, balance of profits brought from last year, gives an available total of 11,733*l.* 1*s.* 2*d.*, which the directors recommend shall be applied as follows: Carry to the general reserve fund 1,200*l.*; write off special expenses connected with increase of capital 84*l.* 10*s.*; confirm dividends already paid—viz., on preference shares 6 per cent. per annum free of income tax, 3,454*l.* 5*s.* 7*d.*; on ordinary shares 10 per cent. per annum, free of income tax, 3,206*l.* 9*s.* 3*d.*; pay a dividend of 10 per cent. per annum on deferred shares, free of income tax, 1,500*l.*; pay management expenses for one year, including managing director's remuneration and directors' fees, free of income tax, 750*l.*; assign to Branch Managers' Provident Fund, 500*l.*; carry forward to next year, 1,037*l.* 16*s.* 4*d.*

C.A.M.W.A.L.—The eighteenth annual meeting of the shareholders in this company was held at Anderton's Hotel, Fleet Street, on November 24. Mr. Horace Davenport (chairman of the company) presided, and there were about thirty-five shareholders present. The chairman, in moving the adoption of the report, said it was a very satisfactory one. The annual meeting seemed to him to partake more of the character of a club. He was pleased to recognise so many friends; but there was one whom he very much missed, Mr. Gould, who was reported to be seriously ill. Mr. Gould was very keen on everything pertaining to Camwal, and he hoped he would soon be restored to health. A certain number of shareholders, he was sorry to say, did not consider that the present balance-sheet was a very satisfactory one, and thought it looked like a falling-off in the dividend. He surprised him very much that they should look at it in that light, and he thought a different complexion could be put upon it if studied more closely. In the first place, the primary object of the association was to bring together chemists to join hand in hand in the business, and he thought that

object had been well carried out by the increase in the sales and the increased number of chemists who had joined them in the enterprise. There was now only a small proportion of chemists left outside. Way that should not be considered absolutely satisfactory he was unable to comprehend. Those gentlemen who objected had not taken into consideration all the additional capital, and he thought that the paragraph in the balance-sheet to the effect that the capital had been more than doubled would explain why the dividend was not so large a percentage as last year, although they were distributing a greater amount. When new businesses were started they could not be expected for some little time to pay colossal dividends, but if they were able to double the capital and pay anything like the dividend of previous years they were doing good business. He calculated that the shareholders were receiving $7\frac{1}{2}$ per cent. upon the new capital subscribed, which of itself was a magnificent result. As men of business, they would not think of taking upon themselves large liabilities unless they were very certain they were going to be able to meet them. Regarding the opening of new factories, the directors considered that large towns with surrounding populous neighbourhoods would be most suitable for them, and they had been at great pains and trouble to find sites in Birmingham and Manchester. They felt assured a large business would be done at these places. At Birmingham they had secured an excellent water, and were now in process of building a factory. They had exhibited at the British Medical Association, and many medical men had testified to the excellence of their waters. In this connection they had to thank their friend Mr. J. H. Wilson for the assistance he had given them at Carlisle, and he congratulated him on his election as Mayor of Harrogate. They had found it necessary to enlarge their factories at Gifford Street (see *C & D*, October 17, 1895) and Mitcham, and practically build another small factory. Speaking of the Chemists' Club, he was sorry this was not the success he had anticipated, as he hoped chemists would use it during the day. From a social point of view, however, it had been a success. He asked those shareholders who intended to apply for debentures to ask for particulars, as they wished to save the considerable expense of printing and posting notices. He concluded by moving the adoption of the report.

Mr. Lavers seconded the motion.

Mr. Nicholls said he would be sorry to offer any unkind criticism, but it occurred to him when reading the report that it was perhaps a little premature to go both to Manchester and Birmingham at once. One town could have waited until they saw what financial success was to be obtained from the issue of the debentures. He thought they should husband their resources, as upon a gross profit of 13.956% they only showed a net profit for distribution of 5.943%, the difference being, to a great extent, eaten up by "improvements to premises," and that, taken with the large increase in management expenses, showed a small result. In his opinion, they were moving a little too quickly, and that was why he did not second the adoption of the report as last year.

Mr. H. Kemp (Manchester) next spoke at length as to the reasons why they intended starting a factory at Manchester. If Camwal had not gone there he felt sure another company would have been floated to supply chemists. They had had many obstacles to contend with, but they were now erecting a well equipped factory.

Mr. Emsley thought the question of supplying "cutting" drug-stores—one in particular he had in view—with Camwal waters would have to be taken into consideration shortly. (The Chairman: We are always taking it into consideration.) He thought it was not policy to supply them direct, but confessed he could not suggest any way out of the difficulty.

Mr. J. H. Wilson (Harrogate), as a retail chemist, said the company he presumed Mr. Emsley referred to sold waters in his town at very much lower prices than he (the speaker) did. How were they to formulate any practical scheme for preventing the supply to cutters which would be legal and in accordance with their articles of association? Chemists themselves were guilty in this respect. Only a week or two ago he had heard of a qualified assistant who supplied his brother, a grocer, at a very low cutting price.

Mr. Emsley: Your articles of association are not unalter-

able. As a limited company they can be altered by publicly advertising the fact that you are going to do so.

Mr. McKnight thought they would get over the difficulty by forming an offshoot association of Camwal to supply grocers, dairies, &c. He knew they lost a good deal of business through their not being able to supply clubs, wine-merchants, &c. Of course the syphons would have to bear a different name and label, but the waters would be supplied by Camwal.

Mr. Elmer Pettinger opposed the formation of such an association, and maintained that the present company could and should be maintained by chemists only.

The chairman, in the course of his reply, referred to the 5,000% put to improvement account. They had gone to considerable expense in pulling down and rebuilding at Gifford Street and Mitcham, but not before it was time. They did not attempt to pay for this property out of the profits, and no business could profitably exist on such a principle. If the company were placed in the hands of Mr. Hooley he would no doubt say it was extremely valuable. He did not know any company in which the assets were so absolutely sound as this one. As to starting fresh factories at two places at one time, they were quite justified in doing this, as they intended to help chemists in other parts of the country. The factory at Birmingham was decided upon to relieve the pressure from Bristol. The growing trade at the latter place was pushing them out of the factory, and there was not another available site. At present Bristol was supplying Birmingham, but when the factory was complete the accounts would be removed there. Replying to Mr. McKnight, he said he would be sorry to see the Camwal waters in milk-shops, &c., and did not think the plan a feasible one.

The motion for the adoption of the report and balance-sheets was then carried unanimously.

The chairman and Mr. J. H. Wilson were re-elected directors, and, on the motion of Mr. Felton, seconded by Mr. Trevaskey, Mr. H. Kemp was elected to the board.

Mr. Richard's proposed, and Mr. Brough seconded, a vote of thanks to the directors, secretary, managers, and staff; and Mr. Butler, in returning thanks, said that very few companies gave their employees such liberal bonuses as Camwal. Mr. Brough proposed that a sum of 50% be given to the directors to do with as they thought fit. [This sum, it was understood, is to be given to the Benevolent Fund of the Pharmaceutical Society.] Mr. Emsley seconded, and the motion was carried with one dissident.

Wills of Deceased Chemists.

The will of Mr. Joseph Fairbrother, chemist and druggist, 16 Hyde Road, Gorton, has been proved by the Rev. James Fairbrother, Rector of Amble, the son and sole executor; the personalty amounts to 139*l.* 18*s.* 3*d.*

The will of the late Mr. John Mills, pharmaceutical chemist, Chester, who died on March 12 last, has been proved in London by Mr. Frederick Mason Julian, of Burslem, the acting executor. The testator's personalty is sworn at 1,510*l.* 1*s.* 5*d.*

The will of Mr. R. H. Nield, drysalter, 62 Rochdale Road, Blackley, and 40 Shudehill, Manchester, who died on September 13 last, has been proved by Mrs. Nield and Mr. Frederick Nield, the widow and brother of the testator, whose personalty is sworn at 2,433*l.* 3*s.* 8*d.* gross, and 2,378*l.* 8*s.* 2*d.* net.

The will of Mr. James Wheeldon, 241 Stockport Road, Manchester, chemist and druggist, who died on May 29 last, has been proved by Mrs. E. J. Wheeldon, the widow—Mr. Frederick J. Wheeldon, the son and other executor-nominate, having renounced probate; the testator's personalty is sworn at 2,591*l.* 16*s.* 6*d.* gross, and 2,480*l.* 16*s.* 4*d.* net.

The late Mr. Wm. Baxter, chemist and druggist, 259 Great Horner Street, Liverpool, having died, on January 5 last, intestate and a widower, letters of administration to his estate have been granted to his son, Mr. Jas. Clements Baxter, M.D. 110 Robson Street, his sureties being Mr. T. Ignatius J. Hughes, chemist and druggist, Liverpool, and Mr. Jas. E. Conolly, of Blundellsards; the personalty is sworn at 2,983*l.* 7*s.* 6*d.* gross, and 2,658*l.* 7*s.* 7*d.* net.

Novelties.

"WILLARDBELL" SPECIALITIES.

THE new truss which the Accrington Surgical Appliances Company (Limited) brought to the notice of the trade through our Summer Issue is one of those achievements in mechanics which, when we see them, we wonder that they have not been accomplished before. In the ordinary spring-truss the pressure is mainly from the circumference, and there is little upward grip about it. In the "Willardbell" truss the object is to place the pad upon the rupture so as to

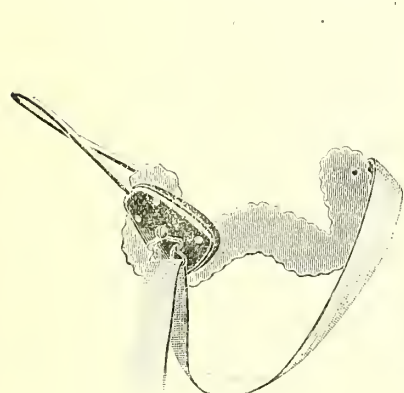


FIG. 1. SINGLE TRUSS.

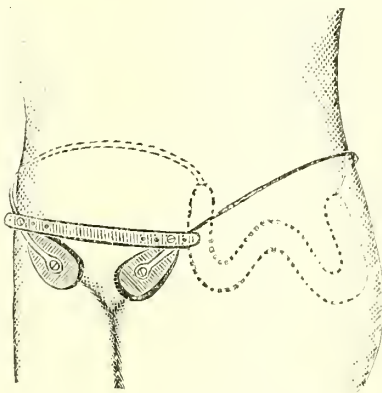


FIG. 2. DOUBLE TRUSS IN POSITION.

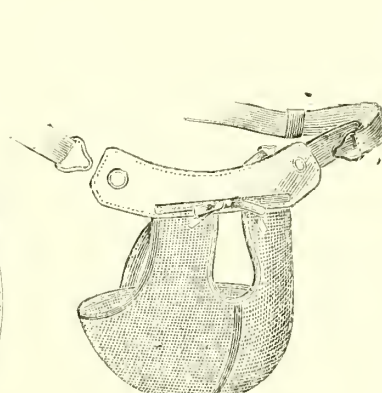


FIG. 3. SUSPENSORY BANDAGE.

close it and concentrate the pressure upon that spot upwards, so as to neutralise completely the downward intestinal force. This is as successful in scrotal as in inguinal hernia. The truss consists of a large back-pad (seen in fig. 1) which rests on the hips (as in the dotted line, fig. 2); from this there proceeds a thick wire spring which goes up above the pelvic bone to the waist, then down to the scrotum. The spring is made of a special incorrodible metal, which can be bent with the hands, and with out heating, to any desired shape, so as to adjust it to the body of the person wearing it. The pad of the truss is filled with water, and is covered with vulcanite, and cloth if desired. Single trusses are completed with a strap. Owing to the position of the truss all the bones are free, so that movements are not interrupted, and babies who are so unfortunate as to require a truss can, with one of these, kick to their hearts' delight without disturbing the truss or bearing down the intestine. Moreover, the company inform us that they have numerous cases of radical cure, in adults as well as children, through wearing the truss. Fig. 3 represents the "Willardbell" suspensory, the special features of which are that the front piece contains a flexible plate of aluminium, which prevents crinkling; the bag buckles on to the strap in a most convenient way, and the provision for adjusting the bag, and so on, is adequate and simple. The suspensory is made of good material, and retails at popular as well as first-class prices. The company make several other surgical appliances, but the only one to which we need refer now is the Jock Strap, an appliance for preventing strain and rupture which all athletic and sporting men are sure to buy if it is shown and its purpose explained. Since the company's advertisement in our Summer Number, 300 agents for the truss, &c., have been appointed in the north of England, so that it seems to have been appreciated. Any other chemist who wishes to know more about the matter should write for sample to the Accrington Surgical Appliances Company (Limited), Dale Street, Accrington.

LORETIN.

MR EUGEN DIETERICH, of Helfenberg, sends us a reprint of a paper by himself on the pharmacy of loretin, in which he gives a number of useful formulae for preparations of that drug, which have been devised and proved in his laboratory. These formulae appear to be excellent, and as our experience is that Mr. Dieterich's formulae go well, we translate a few of those dealing with loretin:—

Loretin Collodion.

	5 per cent.	10 per cent.
Loretin	3i.	3i.
Rectified spirit (64 sp.)	5ij.	7ss.
Flexible collodion ..	5viiss.	5viiss.

All by weight.

This collodion is recommended by Selezinger in the treatment of erysipelas.

Burn-liniment.

Calcium loretinate	3i.
Linseed oil	3iij.
Lime-water	3iij.

Mix.

Loretin Zinc paste.

Loretin	3i.
Zinc oxide	3iv.
Starch	3v.
Vaseline	3v.
Pure wool-fat	3v.

Triturate the powders well, and mix with the fats.

This paste resembles Unna's and Lassar's, and is used in the treatment of eczema.

The paper is printed in German, and any who desire a copy of it should write to Mr. Dieterich's agent, Mr. Buchner, 149 Houndsditch, E.C.

Business Changes.

Notices of changes in the retail trade, and opening of new businesses, are inserted in this section, free of charge, if properly authenticated.

MR. F. W. TOWAN has opened a chemist's business in Connaught Terrace, Mutley, Plymouth.

MR. GEORGE HEAD, for six years with Messrs. Savory & Moore, has purchased the chemist and druggist's business carried on by Mr. T. Johns at 86 High Street, Deal.

MR. J. H. MORRIS, chemist and druggist, of Gravesend, has disposed of his Milton Road business to Mr. Batchelor, of London, and his Windmill Street establishment has been acquired by Messrs. Perry & Son, of Gravesend.

Röntgenography for Pharmacists.

I.

THE note on Röntgen-ray business which we published on October 10 appears to have been taken in the way of an appetiser, for with avidity we have been asked for more. To satisfy this demand, we thought we could not do better than communicate with several pharmacists and firms who have been working at the business assiduously, and we have to express our thanks to all of them for their prompt and liberal response to our request. In this and subsequent articles we shall give the results of their experience, so that enterprising pharmacists may judge the value of Röntgenography as a business accessory, and the inexperienced may learn what are the difficulties and troubles to be overcome.

As yet we know too little about the rays to foretell how far their application to medicine and technology may go. It seems probable that we are now on the threshold of an important extension of their application to medicine, for some of the experiments intended solely to aid in diagnosis have revealed the fact that the rays may possess curative properties. Cases have been reported in which loss of hair and skin irritation have followed the application of the rays, and we have mentioned one case in which an internal growth seemed to be diminished by prolonged transmission of the rays through that part of the body. If, as seems probable, these results are due to electrolytic action, there can be little doubt that a more extended use will be found for the Röntgen apparatus, and that it will become as needful a part of the pharmacist's stock as antiseptic dressings.

MR. LEO. ATKINSON,

whose demonstrations at and communication to the British Pharmaceutical Conference in Liverpool brought the matter solidly to the attention of pharmacists, gave us the opportunity of a chat on the subject, and we were surprised to find that since the Liverpool meeting his views as to the business side of Röntgenography have been much modified. He is now decidedly of opinion that it will not pay pharmacists generally to invest in an installation—*i.e.*, if they do it with the view of making money out of it *per se*. Mr. Atkinson speaks from experience, and while it is in a London suburb, it may be considered applicable to other centres where there are hospitals. Mr. Atkinson's reasons for saying that Röntgenography is not likely to be a paying investment are substantially as follows:—

The demand is intermittent, yet the apparatus has to be kept good, and ready for instant use.

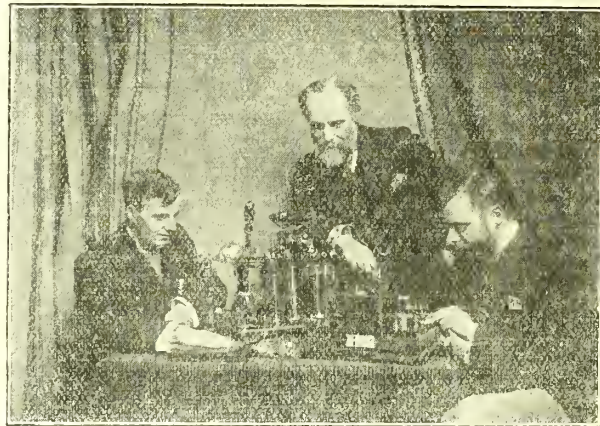
In addition to the initial outlay, there is a steady expenditure for electric power, focus-tubes and coil repairs, which are not much more than covered by fees for work done.

Against these objections Mr. Atkinson sets what he considers advantages—*viz.*, that much personal pleasure may be got out of the work; it undoubtedly maintains the goodwill of medical practitioners; and, if the pharmacist has a good-class retail and dispensing business, Röntgenography assists in maintaining his reputation for having all that is new and the best.

Turning the chat to the apparatus, Mr. Atkinson desired us to once more warn the beginner against the purchase of cheap apparatus, especially coils. His experience is that in the early stage of the art it was difficult to get a coil which was not of foreign make, and App's coils were unobtainable. The foreign coils are wound in one section, and the primary and secondary, instead of being insulated with vulcanite, have only a thin layer of paraffin between them, and this not unfrequently is partially melted when the current is rather strong, with the result that it breaks down. He recommends a coil made in two or more sections. As to the source of the electric force the Grove's battery is, on the whole, the best, but it can only be used in the open air, or in a fume chamber, and this means that it is useless for most pharmacists, who must, therefore, fall back upon the bichromate battery. From three to six quart cells suffice. The cost of working six of these is about 2s. per hour, reckoning waste of zinc plates, and reamalgamating, as well as the bichromate solution. Mr. Atkinson speaks well of accumulators

as being the most cleanly source of electricity, but one means an initial outlay of about 4*l.*, and it can only be used economically if the user is near an electric station. A Wimshurst machine costing 3*l.* to 4*l.* can also be used. Where an electric supply can be got direct from the main, it can be used with a resistance-frame or Tesla apparatus, which costs about 6*l.* 10*s.*

Mr. Atkinson's experience during the past three months confirms what he said at the Conference regarding the vacuum tubes; they vary greatly, and the user can only learn through experience to pick the best. He has not found the photographic plates compounded with fluorescent material to be an advantage—in fact they are rather the reverse, and are apt to produce fogged pictures. The ordinary plate of medium rapidity is all that can be desired; extra rapid plates generally fog. It is not necessary to work in a photographic dark room when skiagraphs are to be taken, or bones examined by the cryptoscope; indeed, a skiagraph may be taken in broad daylight, and there is a good example of that in the photograph, which we reproduce here, of Mr. Atkinson and his two sons in the act of



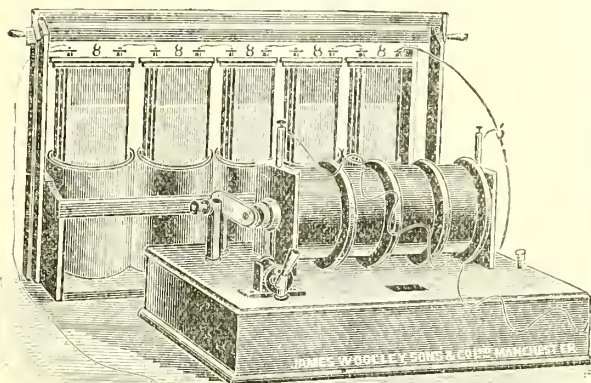
taking a skiagraph. Mr. Leo Atkinson, junr., has his hand resting upon a light, tight bag which contains a sensitive plate (with the film upwards). By the way, the air-pump on the table is one of historic interest, for it was used by Varley for what Mr. Atkinson believes to be the first experimental work done in connection with electrical charges in high vacua.

When examining objects with the cryptoscope in daylight it is advisable to interpose a screen between the window and the table containing the instruments, and the fluorescent screen should be fitted into a stereoscope case—of course, without the lenses. Speaking of fees for work done, Mr. Atkinson says that he charges half-a-guinea for a skiagraph of the hand without the wrist, and a guinea when the wrist is included; but he has not found the work so frequent or onerous as to warrant a fixed tariff of charges. Almost every case has had to be considered on its merits. So far, therefore, Mr. Atkinson's experience is decidedly opposed to the idea that Röntgenography is a profitable extra.

MESSRS. JAMES WOOLLEY, SONS & CO (LIMITED).

This well-known Manchester firm of wholesale druggists have for long cultivated successfully departments in chemical and physical apparatus, and to the latter, Department E, x-ray apparatus is now an established adjunct. Replying to our inquiries for "experience," they say it is important that the coil should be well made. They have found no foreign-made coils in any way equal to the English, which alone they have adopted in all the sets of apparatus, having them specially made for the purpose, and wound in series, so that should one of the sections break down there is no necessity for rewinding the whole of the coil again. They have added a "cut out" to the coil, so that should more current be put on than is necessary the wire in the "cut out" is fused; consequently there is no risk of damage to the coil from this source. They have recently adopted rather an ingenious arrangement of supplying an electric lamp with switch and

lens, which is hooked temporarily to one of the uprights of the coil, and is worked from two cells of the accumulator; consequently a light can be procured at a moment's notice by moving a switch. This they have found very useful when

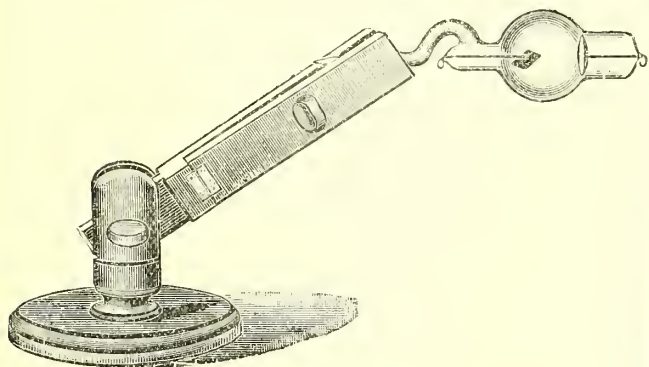


working in a dark room with the screen. They prefer accumulators for working, but when these cannot be conveniently recharged the bichromate should be used. Grove's is better, but objectionable, for the reasons stated by Mr. Atkinson. An objection to bichromate batteries is that they very quickly polarise, and cannot be used for longer than a quarter of an hour or twenty minutes.

The so called focus-tubes are by far the best. Messrs. Woolley have tried various modifications, and have obtained a tube in which the platinum-plate is entirely independent of either the cathode or the anode, and this they find to give excellent results. A print they send to us, which was taken with one of these tubes influenced by a 4-inch spark-coil, exposure slightly under two minutes, shows the hand of a man whose second finger was removed in childhood, and every part is brought out with great clearness.

As to the cryptoscope, in their experiments they have found nothing equal to barium platino-cyanide. The screen can either be fixed at one end of a box, or it may be fixed in a camera by removing the focussing-screen and replacing by a fluorescent screen. The lens, and the board carrying the lens, should be removed. This is the form which they have used, and they have found it very satisfactory.

In working the x -ray apparatus care should be taken that the wires from the tube to the coil do not touch, and neither should the hand come in contact with the tube when the



current is passing. The above illustration shows a useful stand which the firm supply for holding the focus-tube while working.

Messrs. Woolley print a catalogue of x -ray apparatus, which they will send to anyone on application. It contains illustrations of all the different parts of the apparatus, and from it any one will be able to count the cost of a complete installation.

FOR WHOSE SOAP?—Visitor: Is Mr. Palette in? Maid: No, sir; he's at the St. Vitus' Dance Hospital getting ideas for a new art poster.

Fluorescent Screens.

By S. W. WOOLLEY, Ph. Chem.

THE most important thing in radioecopy as an aid to diagnosis is a good screen, one which will utilise to the utmost the x rays given off by the Crookes tube. A fluorescent screen is a flat surface, which may be of cellaloid, wood, cardboard, or vellum, upon which has been spread a chemical possessing the power of fluorescing when acted upon by the x rays. At present there is no substance known which will utilise the whole of the x rays given off from a Crookes tube, as after passing the rays through two good screens there still remains enough to fluoresce a third screen with sufficient vigour to show the bones of the hand distinctly. Several substances have been recommended and tried for coating the screens, and I propose to give the results of my experiences with search of the best material.

Barium platino-cyanide is, without doubt, the best thing used as yet. I have had many failures, due to using samples of the barium salt, which will not fluoresce. As ordinarily met with, this substance is in yellow needles, with a brownish tinge and an iridescent appearance, but nearly useless for screen-purposes. The other variety, which is now easily obtainable commercially, is in tiny crystals of a greenish-yellow colour, and makes a magnificent screen, fluorescing with a pale apple green tint. The difference in these two varieties is due entirely to physical conditions observed during crystallisation. The crystals must not be triturated in a mortar, as injury to them affects the fluorescence in a marked degree. There is a considerable difficulty in getting a perfectly even coating of the salt; the method which I adopt is to coat a piece of cardboard with amyl varnish, and sift the salt on from a fine muslin sieve. Like plaster spreading, one has to acquire the knack before turning out perfect work. There are some excellent barium screens on the market of foreign make in which the platino-cyanide appears to be spread on vellum stretched on a wooden frame, and, judging by their exceptional evenness, are probably spread by machinery. The salt is soluble in water, and I have tried painting a solution on the screen, but, judging by the result, the physical conditions necessary to produce brilliantly fluorescing crystals were absent.

Potassium platino-cyanide is a white salt in small crystals, and is best applied in aqueous solution. It fluoresces of a blue tint, and makes a screen equal to barium, but, being slightly deliquescent, does not stand the action of the atmosphere.

Calcium tungstate, of which a minutely crystalline variety is sold for screen-purposes, gives a violet fluorescence, but is a long way behind the preceding salts in efficiency. Its cheapness is an advantage, it being 1s an ounce, as against 40s for the barium salt. Calcium tungstate is said to have a slight "continuing" action, but I am unable to confirm this from personal experience. It is thought by some workers that it may be possible to make a screen upon which the image will remain for a few minutes after the x rays have ceased to act upon it, and thus enable closer observation to be made. With this end in view I understand that an exceptionally brilliant sample of calcium sulphide made by Balmain's Luminous Paint Company is being experimented with.

Uranium-ammonium fluoride is of a pale lemon colour, and minutely crystalline. It is sold at 2s. 6d. an ounce. It fluoresces a pale yellow, and is of about the same quality as calcium tungstate. These two make very even screens by mixing to a cream with mucilage and water, and after spreading on the card, tapping it on the counter to effect an even distribution.

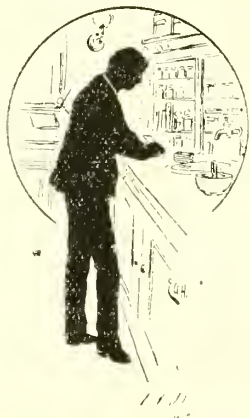
In buying a ready-made screen it is advisable to stipulate for an actual trial, as there are some on the market quite useless for practical work, and I can only in charity suppose that the makers and vendors have never seen a really good screen, or they would not continue to sell such unsatisfactory articles.

A PARROT that kept asking passers-by if they did not want a glass of soda-water was an original method of advertising made use of by a Chicago druggist during the summer.

Delusions.

PART I.

THE callow youth with throbbing heart and rose-pink cheek
Who flusters his grave seniors by his over zeal,
Nor heeds the ribald jest of juniors mocking sore,
That feverish folds the seidlitz, or thumps hard
At tough reluctant pill-mass—he has come
A newly-fledged apprentice fresh from school,
With dreams of endless chemical experiment,



Of bursting Florence flasks, and much display
In manner pyrotechnical. But lo!
Ere yet the months have lapsed into a year
And things have grown familiar, sure it haps
His dreams become less roseate in hue and soon
Are from his mental vision clean dispelled.

SONG OF THE APPRENTICE.

When first I donned my 'prentice garb,
And took to the pharmacist's trade,
No thought had I of the pill rhubarb,
Or the pungent smell of the ammon. carb.,
Or the taste of the pounded aloes Barb.,
When aperient pills are made.

Sing woe is me for the dreams of the past,
And the hopes which long have fled;
For your notions change, they change so fast,
When once you are *in* the trade.

No thought had I of a dusted shelf,
When first I came to the trade,
Or of conduct meet to fit oneself
For a life which scorns all worldly pelf,
And works for Art, and Art itself,
Nor dreams of fortunes made.

Sing woe is me for a breeze to waft
Me back to the heaven I made;
For I wot not the wight of the pharmacist's craft
When first I came to the trade.

Small thought had I, but a vain conceit,
When first I came to the trade,
Nor dreamt of salts in a parcel neat,
Or ointment of zinc to be mixed complete,
Or of what to prescribe for the blistered feet
Of sufferers in every trade.

Sing woe is me for the scorn I laughed,
When warned by the wise and staid,
Small thought had I of the pharmacist's craft,
When first I came to the trade.

PART II.

The years roll by, and now our goodly youth,
Freed from the galling thralldom of his teens,
Has plucked up heart of grace, and 'twixt the intervals
Of tincture-percolation watches with tender care

The budding promise of a hirsute appendage
Dawn on his upper lip. With firm conviction talks
He loud of pharmacognosy, and demonstrates
By subtle logical analysis how that
Of chemistry and pharmacy and botany he has
A deeper and profounder knowledge than
His wise and learned preceptors. With brazen cheek
(No longer conscious-red, but hardened grown
By knowledge of the world and weight of years)
He pays his ducats to the Registrar
And essays to teach wisdom to the Board
Of pharmaceutical examiners.
Great his surprise, disgust unutterable,



When, after riddling well his knowledge-store,
The bland and sympathetic chairman intimates
That most regretfully the Board considers
Him yet unworthy of a place among
The "Minor" lights of science; but they hope
That studious diligence may in a year of two
Bring ultimate perfection and certificate.

THE SONG OF THE "PLOUGHED."

We've been to the Square and got the bounce,
Got the bounce have we,
And the reason why we will now announce—
It's as plain as A B C.
Because we knew just a *little* more
Of modern pharmaceutic lore,
Than the Board themselves, it vexed them sore,
So we're kicked for jealousy.

But what care we though we've got the sack?
On the pestle's hilt we've vowed
That the only men who are worth a plack
Are the men who are always ploughed.

We showed them tricky dispensing acts
Which they never had seen before,
And in botany gave some startling facts
Which astonished them more and more;
But when we stuck on a Latin word
Which they themselves had never heard,
They said our ignorance was absurd,
And showed us to the door.

But what care we though we've got the sack,
When it can't be disavowed
That you'll find the best men of the pack
In the ranks of the men who are ploughed?

PART III.

When next we meet our youth of former years,
He stands a full-fledged pharmacist, but now
His joys are softened by the multitude
Of former griefs which robbed him of his mirth,
And of his ducats, and his pride likewise.
Now tends the current of his thoughts towards
A fair full pharmacy in swell suburb,
Where life is sweet, and days of comfort pass
With nights of undisturbed repose; where stores are not,
And he himself become the confidant

Of ladies hypochondriac; and learned physicians bring
Their hieroglyphics to be carefully evolved,
By skill and swift manipulative art,
Into the various potions, powders, pills,
Which go to cure the ills of human flesh.
Alas, for human hopes! Light as a thread
Of gossamer, and eke as easy blown
Forth into nothingness by ruthless winds of fate!
In middle age we find him, bald and worn,
Honing with meek and unaffected zeal
The humble albeit useful copper coin
Which ancients named "denarius"; selling with zest
The perfumed unguent certain ladies use



For their flowing locks' adornment; with counsel sage
For gentlemen with countenance made rubicund
By reason of much dryness in their throats;
Administering freely draughts which soothe
To infant prodigies with orbs strabismus;
Slaving from early morn till early morn,
Gaining thereby a weary-worn existence,
With all th' ambition outcrushed from the soul.

THE SONG OF THE PHARMACIST.

Toil and toil, and worry and woe, from morn till early morn;
Hope for naught save the same routine, with never a joy
forlorn;

Hope for naught save the prospect bright of *another* store to
complete

The sum of the pharmacist's wretchedness, the last of his
hope's defeat.

Toil and worry and woe.

Hope against hope for the cheering glimpse of the dawn of a
better day;

The horizon darker glooming makes him heartsick turn
away

To hearken to words of wisdom from the lips of the all-
knowing *as*

Who *knows* that the pharmacist's business is one which few
can surpass.

Thoughtlessness, ignorance vain.

Grind and grind, 'tis the grinding-up of the hopes of his
early youth—

Grinding the best from his manhood. With justice and
honour and truth

Crushed in the world's mortar, with the pestles of sorrow
and pain,

Small wonder he sneers with the cynic, nor thinks e'er to
smile again.

Work, disappointment, and pain. W.C.

How to Advertise.

ORANGE JUDD, the publisher, owed his first success
largely to the mistake of his office boy in ordering
a page advertisement instead of a column, as instructed
Moses P. Handy, of the *Chicago Times-Herald*, says:
"When I talk to a man who has made a fortune by

advertising, I wonder that anybody who has anything
to sell does not go and do likewise. One man told me a
day or two ago that his concern, with a nominal capital
of \$160,000, only \$30,000 of which was paid in, has divided
in a single year among three partners profits to the amount
of \$750,000, and that exclusive of salaries of \$50,000 and
\$25,000 drawn by two members of the firm. Ten or twelve
years ago this man was a drug clerk on a small salary in a
Western town, and is now one of the millionaires of New
York. 'Without advertising I might have made a living,' he
said, 'but it was advertising that made me rich, and adver-
tising a very simple commodity at that.' Another man, who
bears similar testimony, tells me that his concern, which
began by investing \$10,000 a year in advertising, increased
the amount every year according to the increase of business,
and this year expects to spend \$1,000,000. Still another,
who confined himself entirely to the newspaper and magazine
in the exploitation of his specialty, never having touched a
dead wall, a fence, or the broad side of a barn with poster or
paint brush, and never employing a salesman, has a cool
million salted down in real estate, keeps a yacht, and spends
most of the year abroad in luxurious living."

Inserts.

OUR Winter Number will be published on January 30,
1897, and it will be produced in that elegant style
which has made our Winter and Summer Numbers famed
throughout the world for their typographical excellence, and
a sure return to those who advertise in them. We call
attention to the Winter Number thus early because we shall
receive circulars and price-lists for insertion in it, and it is
none too early to instruct printers. Already we have booked a
number of lists, and we have no desire to give away the best
positions without letting regular advertisers know of it.
Will they please take note? We are glad to say that we
have recently heard of splendid business resulting, and still
coming in, from the inserts in the Summer Number. Further
particulars may be obtained from the publisher.

At the Counter.

A LEWES chemist writes:—"A boy has just purchased of
me $\frac{1}{2}$ lb. 2s. Horniman's tea, coming into my shop with a
2s. 6d. Seigel's Syrup in his hand."

CUSTOMER: "Please give me a ninety-pound-grey-
powder!" "After careful consideration," writes a Liverpool
correspondent, "we supplied *antipyrin powder*."

AN ESTIMATE.—Enter small boy of 8. "Two penn'orth
cough-mixture." Chemist: "Who is it for?" "Small Boy:
"Me brutber." Chemist: "How old is he?" Small Boy:
"He isn't breeched yet." Served.

"CARBINATIVEWINE" is the test of an order sent to a
Yorkshire chemist, who sends it to us, with the information
that he supplied carbonate of iron. A previous order sent to
him was for "Fulus youth by the rood." "That," he says,
"is the orthography exact, but the writing was better than
mine. I supplied a pennyworth of lump fuller's earth. The
same article is frequently asked for here as 'Walker's yearth.'
The biggest astonisher I ever had was one night when a sabbly
little girl came in and asked for three-pennyworth of ferri
et ammon. cit. It took me five minutes to make out that she
was asking for it by the Latin name. Chloride of lime is
generally called 'Kemik,' though I think this is rather a
well-known name in the North. Vogeler's compound has
been advertised here lately and has caused some confusion
to the natives—so much so that for about three days every
customer who came in and didn't know what he had come
for got Vogeler's."

Marriage.

KEITH—WISHART.—At the Palace Hotel, Aberdeen, on November 17, by the Rev. T. Ogilvy Duncan, M.A., minister of the parish of Kintore, Albert Wm. Keith, chemist, Fyvie, to Elizabeth Lipp, youngest daughter of Alexander Wishart, Bridgellis, Kintore.

Deaths.

JACKSON.—On November 4, Mr. Vincent William Jackson chemist and druggist, Hartlepool. Aged 62.

NEWINGTON.—On November 10, Mr. Henry P. Newington, chemist and druggist, Tottenham, N. Aged 74.

RICHARDSON.—By the death at his residence, on November 21, of Sir Benjamin Ward Richardson, M.D., F.R.S., medicine has lost one of its most original exponents and successful practitioners. Orthodox in many things, Sir Benjamin was too progressive to be ranked with any school of treatment. His views regarding the use of alcohol and in respect to exercise so modified his practice that it had an individuality of its own; while his work as a sanitarian, as scientist, humanitarian, literateur, lecturer, and politician, gave him rank as a public man. Sir Benjamin was born at Somerby, Leicestershire, on October 31, 1823 and after his education and a short pupilage with a surgeon, he proceeded to Glasgow as a student of Anderson's College Medical School (then called the Andersonian University), and under Dr. Thomas Graham became an expert chemist. He became a licentiate of the Faculty of Physicians and Surgeons, Glasgow, in 1850. Then he came south to Barnes,



where he was assistant to and ultimately partner with, a Dr. Willis. In 1854 he took the M.D. degree of St. Andrews, at the same time receiving M.A. *honoris causa*. In 1856 he became M.R.C.P., this indicating his entrance into consulting practice in London, and the same year he received the Astley Cooper prize of 300*l*. for an essay on the Coagulation of the Blood. Amongst the honours conferred upon him were F.R.S. in 1867, and LL.D. St. And. in 1877, besides many others. It is difficult to deal adequately in brief space with the life work of this remarkable man. To pharmacists he is best known for his researches in anaesthesia, which have added methylene chloride and other ethereal bodies to this class of substances, all of which he studied psychologically

as well as physiologically. In the chemical part of his researches, Mr. John Robbins, of Oxford Street, greatly assisted him. He proposed the use of sodium ethylate as an escharotic, introduced styptic colloid, and was the first to call attention, in 1865, to the action of amyl nitrite, although others have taken the credit of it. He was connected as physician with various hospitals, but it was at the London Temperance Hospital where one could see the peculiarities of his methods carried out, and where his resources were brought into play. Though an ardent temperance reformer, he did not scruple to prescribe alcohol (generally as S.V.R.) when it was needed, but he was strenuously opposed to using it as a vehicle or menstruum. His work as sanitarian and humanitarian was largely influenced by his love for man, which feeling was extended to the lower animals in his creation of the lethal chamber at the Battersea Dogs' Home, and his efforts to obtain the painless slaughter of animals. His writings were voluminous, and latterly were chiefly published in his quarterly *Asclepiad*. On the Wednesday evening before his death he corrected the last proofs of a book, entitled "Memories and Ideas," which he had just completed. He wrote the title-page, and made some alterations in the preface. After dinner he went upstairs, intending to come down again, but he was away so long that his son went to look for him, and found him reclining in a chair unconscious, suffering from an apoplectic seizure. There had never been any apprehension of apoplexy or of sudden collapse of any kind, and Sir Benjamin, who was in full practice till the end, thus died in harness. He leaves a widow, and a daughter and two sons (one of whom is an artist and the other a solicitor). In the general election of 1892 he unsuccessfully contested the Walton Division of Liverpool as a Liberal, and was knighted in 1893. The body was cremated at Woking on Thursday, November 26.

SUTCLIFFE.—On November 12, Mr. Benjamin Sutcliffe, chemist and druggist, 165 Shaw Road, Oldham. Aged 71.

The late Baron Sir Ferd. von Mueller.

SOME PERSONAL REMINISCENCES.

THE Editor of our Australasian journal, who was in correspondence on botanical subjects with the late Baron Sir Ferd. von Mueller almost up to the time of that scientist's death, sends us a few personal reminiscences of the man who, though of alien birth, will rank in history as one of the foremost Australian scientists. The last botanical note published by Von Mueller was an account of *Tysonia*, written by him for the *Chemist and Druggist of Australasia*, and printed in its October issue. It was the Baron's habit to write a letter to the Australian papers every year inviting persons in the least-explored parts of the continent to send him specimens of the small, and mostly, as yet, undetermined plants which flourish in the early spring and then disappear until the seed germinates again the following season. This year he added to his usual appeal a sentence asking his correspondents to accelerate the despatch of their specimens, as the spring of 1896 might be the last he would see.

Baron v. Mueller was a well known figure in Melbourne and, indeed, throughout Australia, for there were few settled districts in the country that he had not visited frequently. His photographs all give the appearance of a tall and burly man, but in reality he was rather under than over middle height. He had many little peculiarities, which made his personality conspicuous. One of these was his habit of constantly wearing a woollen muffler round his neck, even when he appeared at balls or public dinners. This was done out of a, perhaps exaggerated, regard for his chest, which was delicate. Fear of consumption drove him from Germany at the age of 22, and kept him from ever visiting the Fatherland again. In fact, for forty-nine years he never quitted the Antipodes. The Baron never married. He was said to be "Wedded to Botany," but he was a very companionable man withal, fond of dancing and jovial company. He was a man of Spartan simplicity of habit, and jocularly boasted that he had never in his life possessed either a watch or a looking-glass. There was, however, one point

where his simplicity forsook him, and that was his weakness for wearing the numerous decorations bestowed upon him by European rulers, and of seeing in print the string of capital letters that hung to his name like the tail to a kite. That weakness, however, was a venial one, accounted for by Von Mueller's secluded life and his occasional fits of despondency over the want of gratitude and recognition shown towards him by private individuals in Australia upon whom the commercial exploitation of his discoveries had conferred wealth. And, at any rate, the decorations he held were the visible signs of real services bestowed upon mankind by their owner. He possessed twenty-five decorations and was a member (mostly honorary) of 300 learned societies. His first Australian experience was pharmaceutical, for he acted for over a year as assistant to Mr. Moritz Heuzenroder, chemist, of Adelaide. From the day of his arrival at Adelaide until a few days before his body was laid to rest in St. Kilda Cemetery at Melbourne, Von Mueller led the life of a disinterested and unwearied scientific investigator. Professor Planchon in the *Revue des Deux Mondes* said that in Von Mueller were combined the thoroughness of the German and the practical commonsense of the British scientist. Sir William Hooker and other botanists dedicated works to him; and Dr. Petermann, the German geographer, committed himself to the statement that, but for Von Mueller, the centre of the Australian continent would have been a sealed book to this day. An Australian mountain and river, a glacier on Spitzbergen, and a waterfall in South America have been named after Von Mueller, and fittingly so for next to botany, geographical exploration was the pursuit that attracted him most. After several minor voyages of exploration, Von Mueller accompanied the famous Australian traveller Gregory in his expeditions in search of the mysteriously vanished Leichardt, which led to the mapping out of vast portions of the interior of Australia. During his long career as Government Botanist of Victoria, Baron von Mueller published forty volumes of botanical works, many of them of the greatest importance. He called attention to plants previously unknown to be of economic value; he was the first to build glass houses for tropical-plant culture in Victoria, and he took a leading part in the introduction of salmon into the colony.

That Young Man.

THE young man whose portrait accompanies this note was charged at the Lichfield police court on Monday last with obtaining 5s. by false pretences from Mr. Albert Edward Marshall, chemist and druggist, Lichfield. He gave his name and address at the court as Edward Brokbank, clerk, 62 Queen's Road, Wimbledon. It was stated that on the previous Saturday evening he had called on Mr. Marshall and represented himself to be Ernest Thompson, the son of Mr. Thompson, of the firm of Messrs. S. Maw, Son & Thompson, of London, and a friend of Mr. Fleming, chemist, of Wolverhampton, whom he said he had been visiting. He said he was calling to see that the customers were not neglected, and eventually asked Mr. Marshall to cash him a cheque for 11*l.*, but as he could not borrowed 5s. for which he gave an I.O.U. As the man left the shop Mr. Marshall noticed that his shoes were shabby and his heels down, and this aroused his suspicions. In company with Inspector Pilliner he went to the City Station, where the prisoner was about to depart by train. The man returned him 4s. 10*d.*, offered him an ounce of tobacco, and asked to be forgiven, saying he was a gentleman by birth and education, but was in great distress and wished to get money to go to his brother. He had also called on other chemists in Lichfield, and it was stated that he was believed to have been perpetrating similar frauds in other parts of the country. He was remanded till Saturday November 23, and the Lichfield police will be obliged if any chemist who may recognise the likeness will communicate with them at once.

We do not, of course, allege at present that this young man is the same whose borrowing from chemists we have been reporting week by week on information received from Messrs. Edwards, Barclay, May, Roberts & Co., and Hearon, Squire

& Francis. We have now a letter from Mr. J. Weston Aplin, of Chislehurst, who sends us an I.O.U. for 5s., dated October 13, given him by "a bicycle young man" who gave his name as G. Howard, and said he was in Messrs. S. Maw, Son & Thompson's counting-house. Mr. Aplin says he seemed "very young, no hair on cheeks, smoking cigarette, about 5 feet 6 inches, fair complexion. He was just returning from holidays, smashed bicycle, had not enough to return to town; would I lend him 2s. 6*d.*?" He was in the counting-house of Maw's, knew my firm well. I fell in the trap and lent him 5s." On writing to Messrs. Maw he was informed that they had no one of that name in their counting-house. "Chemicus" (23/7/25) also writes in reference apparently to the same person:—"A young man, of easy gentlemanly manners, came into my shop, addressed me by name, smiled pleasantly, and held out his hand with the air of an old acquaintance. On my failing to recognise him, he explained that he was Mr. Edwards, Jun., of Queen Victoria Street; that he had a little business in a neighbouring town, and just ran over to call on



some old customers of the firm, lest they should feel neglected. Had only had the pleasure of seeing me once before, several years ago, regretted that my account was so small, and explained the discontinuance of their representative's visits. Was surprised to hear how patents were being cut in the town, knew Jesse Boot well, and was sure that he would not condescend to sell at such prices. Had left his top hat at the Clarence, and strolled round in his cap. (Warning No. 1) Their house was always celebrated for straightforwardness, courtesy, and promptness. (Warning No. 2) Had run rather short of money. Could I cash him a cheque? But after a fruitless search in his pockets, found that he had left his cheque-book in his portmanteau at the hotel, and perhaps I would kindly lend him 2s. 6*d.*, and he would call again in the afternoon. Anxious to get to my business, deceived by the plausible manner of the young man and by his apparent familiarity with a firm I had dealt with all my life, and like the man in the poem who failed to recognise the three warnings of the King of Terrors, I fell into the trap. It is needless to add that I have never seen 'Mr. Edwards, Jun.' or my half-crown since, and, I am afraid, hardly deserve to do so. From a paragraph in last week's *C. & D.*, the gentleman seems to travel under more than one alias and it would appear that others have been deceived besides."

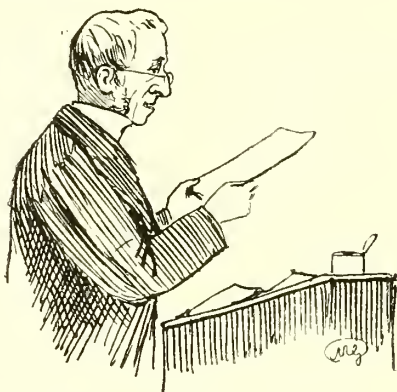
"CASTRATED Oil," "Automatic Vinegar," are orders received at Barrow-in-Furness.

The Medical Parliament.

THE General Medical Council assembled at their new offices, 299 Oxford Street, this week for their sixty-first meeting, business beginning on Tuesday with an agenda which will carry the members into the middle of next week. The official notification having been read of the appointment of Dr. Edward Hallaran Bennett as representative of the Dublin University, the

PRESIDENTIAL ADDRESS

was delivered by Sir Richard Quain, Bart., who referred, in the first place, to the regret felt at the absence of one of their colleagues, the Rev. Dr. Haughton, who, after representing the University of Dublin on the Council for eighteen



THE PRESIDENT DELIVERS HIS ADDRESS.

years, had resigned through ill-health. His striking personality, his pleasant smile, his cheery laugh, and his literary and scientific attainments, had left an impression which would not soon be forgotten. No one more heartily supported a good and just cause, no one more earnestly opposed what he believed to be wrong or unjust; they would miss his eloquence, his wit, and his humour; but they had the gratification of knowing that his health was so far restored as to enable him to continue his routine duties at the University. Proceeding to review briefly the principal incidents which had occurred since the Council last met, the President referred to the question connected with the Royal College of Surgeons of Ireland, and said that no action had been required in any penal cases. With regard to the important subject of medical qualification, he mentioned that in May, 1887, a committee was appointed to consider and report upon the minimum efficiency required of students, and that this formed the first step to securing anything like uniformity in professional qualification. In June, 1869, a committee was appointed to consider what subjects might be taught with most advantage, who, after much patient investigation, made a very complete and interesting report, to which was due the vast improvement which had since taken place in medical education and examination. The subjects of education then enumerated—viz, anatomy, general anatomy, physiology, chemistry, *materia medica*, practical pharmacy, medicine, surgery, midwifery, and forensic medicine—had become so extended and so comprehensive and so subdivided that the necessary knowledge was now extremely difficult to acquire, so that, while thirty-six months used to be deemed sufficient, five years had now to be given to the study. The subject was one of the greatest importance, and its consideration paramount among the duties imposed on the Council.

The vote of thanks to the President was moved by Sir W. Turner, who said he could not quite go with all that had been said respecting the times when the medical student's education was supposed to be so much inferior, for before entering the profession he was then called upon to spend not five but eight years in preparing for it.

DR. GLOVER PROTESTS.

A point of order was next raised by Dr. Glover, who referred with considerable feeling to the fact that he had sent in a notice of motion respecting penal cases which he considered a matter of urgency, and intended to bring forward at this stage of the meeting; but the executive committee had postponed the resolution until Saturday. It was a point involving the rights of individuals and the uses and reputation of the Council in a way few cases had done since the Council began, and he wanted to know whether the committee had the right and power to deal thus with a matter of urgency. Sir W. Turner promptly came down on the speaker with the observation that resolutions must be received at least six clear days before the meeting; but Dr. Glover contended that special provision should be made for matters of urgency which did not admit of formal notice. The President intimated that the business must be arranged beforehand, that this was done by the committee according to their discretion and in order of precedence, and that after fully considering this case, they had arranged for it to come before the penal committee at 1 o'clock on Saturday. Dr. Bruce thought the Executive Committee had taken upon themselves to exercise a jurisdiction which belonged to the Business Committee; but Sir W. Turner quenched this argument by stating that all the members of the Executive were also on the Business Committee. Dr. Glover also submitted the following motion:—

That it be referred to a sub-committee to advise as to the best means of making the Registers and the Minutes more available for use at short notice.

It appears that the new lists are simply incorporated with the old register, and a strong desire was expressed that they should be printed separately so as to be readily available. Dr. Tukey declared that a perfectly enormous and preposterous sum had been spent for an index to the registers, and it was practically useless. The President reminded objectors that the register was designed primarily to enable the public to distinguish between qualified and unqualified practitioners, and that it was printed by Government at the Stationery Office; and this fact formed the burden of the answer given, for since the Stationery Office had the work done—and, what was more, paid for it—who was to pay for this proposed additional list? "Who is to prepare and who to print it?" asked Mr. Miller, the Registrar. The registers could be and were supplied to anyone who chose to come and copy them. Upon this Dr. Glover indignantly inquired whether Mr. Miller could really stand up and tell them that this important and wealthy body, with five or six clerks, could not have the lists prepared, and afford 30s. for the printing of a thousand names? Sir Walter Foster urged that every facility ought to be given to gentlemen who were candidates, and ultimately the sub-committee asked for was appointed, consisting of Dr. Thorne Thorne, Mr. Teale, Dr. Glover, and Mr. Thomson.

PENAL CASES.

Another somewhat animated discussion arose over a proposed alteration of the standing orders with respect to penal cases, by which it was set forth that the President was to receive abstracts of complaints, decide whether or not they came within the jurisdiction of the General Council, and direct that the case be referred to the solicitor and, if necessary, Counsel's opinion obtained, preparatory to its coming before the Penal Committee. Dr. Bruce strongly argued, with the evident sympathy of the meeting, that questions of professional misconduct did not affect the lawyer but the profession, and ought not to be filtered through solicitors, but should go straight before the Penal Committee and not a single individual only. He moved that the paragraph be sent back to the executive committee. Dr. Pettigrew seconded with no less feeling, urging that no individual, however experienced, should wield the power claimed for him by the old and now by the proposed new standing order. He deprecated any standing order which conveyed the impression that things might be done in a hole-and-corner way. Mr. Brudenell Carter pointed out that the President only stopped a case if he considered it outside the jurisdiction of the Council, and that it might be hard on an accused

person if he had to wait for a meeting of the penal committee. Words were further quoted, however, showing that the President might exercise the same power at a later stage in the event of his disagreeing with the penal committee as to whether an inquiry should be held or no. A remedy for Mr. Carter's objection was found in Dr. Glover's contention that the penal committee should meet oftener—the sooner after a case reached them the better. The President, while thanking those who were anxious to relieve him of responsibility, observed that he always avoided it when possible; at the same time he quoted samples of what some people looked upon as disgraceful and “infamous” conduct, which hardly seemed to require the attentions of a committee. Sir Walter Foster said they had no objection to the President dismissing trivial cases, but the great fault in their present method of procedure was that a complaint of grave character might be made against a professional man and judged by the lawyers before it came before the profession at all. As soon as the President decided that an accusation came within the four corners of the Act it should be set before the members of the Council, through the Penal Committee, before coming before the lawyers at all, who should only be approached when it was decided to be an offence against the morals of the medical profession. The President, in putting the motion, gave as an instance of the interest taken in their morals by their Scotch brethren that the mover and seconder both hailed from Scotland, from which country they had no penal cases. (Laughter) The motion was carried, and the remainder of the sitting was occupied by a technical discussion of the disciplinary powers of qualifying medical authorities, especially those of Scotland and Ireland, the subject being ultimately referred back to the Executive Committee.

ALSO WANT A HIGHER PRELIMINARY.

A motion brought forward by Mr. Thomson—

That the course in general education prescribed for students seeking admission to the Medical Profession is inadequate, and that it be referred to the Education Committee to report to the next meeting of the Council in what manner the standard may be raised, and greater uniformity of tests be secured,

was withdrawn in view of the fact that the committee referred to submitted a report suggesting that in the meantime certificate-granting bodies should gradually raise their standards, and that the Committee should further consider the matter, with the object of definitely raising the standard in 1900. This was agreed to.

THE B.P.

The only other business so far transacted, which we can mention in this issue, is the report of the Pharmacopœia Committee, which stated, *inter alia*, that advice and assistance have again been received from Drs. Lauder Brunton and Walter Smith, Referees in Pharmacology, and four of the printed sections of the book have been placed before the Referees in Chemistry, Drs. Thorpe, Tilden, and Emerson Reynolds, and also before Mr. E. M. Holmes, one of the Referees in Botany. Considerable help has also been afforded by the Pharmacopœia Committee of the Pharmaceutical Society. It is estimated that at least three-fourths of the labour of construction has now been accomplished, and it is expected that the new Pharmacopœia will be published towards the latter part of 1897. The committee hope that their labours and the assistance afforded by the referees, the editor, and Secretary, will lead to the production of a volume which shall adequately reflect the progress since 1885 of all branches of knowledge affecting this department of medical science.

AN IRISHMAN recently entered a dentist's room to have a tooth drawn, but, when he had sat down in the chair and saw the gleaming forceps, he resolutely shut his jaws and could not be persuaded to open his mouth. The dentist's assistant, quietly slipping behind the chair, pricked the sufferer with a pin somewhere below the base of the spine. With a howl the victim opened his mouth—in went the forceps, and out came the tooth. “It didn't hurt so much after all?” consolingly queried the dentist, after the operation. “Well, no,” answered the patient, rubbing the part where the assistant had applied the pin; “but, begorrah, Oi didn't think its roots wint so far down as that.”

Some Notes on American Pharmacy.

By E. H. GANE, Ph. Chem.

Read at a meeting of the Chemists' Assistants' Association on November 19, 1896.

IN looking over the papers on this subject which have appeared in recent years in English drug journals, I am struck by the unanimity with which all the writers indulge in what is variously termed in the United States “patriotic eagle screaming,” “twisting the lion's tail,” or, more appropriately, “pharisaical criticism.” The possibility of English pharmacists having anything to learn from America is entirely ignored. One of the most recent of these papers, contributed to the Pharmaceutical Society by Mr. N. H. Martin, is so steeped in “insular prejudice” as to be almost valueless as a contribution to the subject. Pharmacy in the United States is in no more organised a condition than in England, but it must be considered from a different standpoint. The professional element as yet finds no place in American retail pharmacy, which is, moreover, much confused by the infusion of the customs of almost every European nationality, which have not yet even begun to assimilate harmoniously. Americans are now paying a large amount of attention to the decoration of the store, seeing that it is often utilised as a rendezvous or a general lounging place where the idler may pick up the news of the day or the newspaper man secure “copy.” The presence in almost every drug-store of a telephone and directory, and the fact that many druggists act as assistant postmasters (unauthorised), tend to preserve this feature and to detract from the true dignity of the pharmacist. The American store is popularly known, not by the quality of the drugs supplied, but by the quality of the products of the soda-fountain. This latter is often a gorgeous structure resplendent in marble and onyx, and glittering with silver taps and fixings. Its cost will be anywhere from \$100 to \$3,000, and oftentimes it constitutes the only fitting of any value in the store. In others the fittings will be made to harmonise, and some stores are marvels of the decorator's art. In others, again, the gorgeousness is of a character belonging rather to the drinking-saloon than to a semi-professional calling. In all the more important stores most attention is paid to the soda-fountain, seeing that it is the article from which most of the druggists' profits come. A good pharmacist must be a good bar-tender, and the man who can best titillate the thirsty palates of the American public is he who will secure the most trade. In addition, every drug-store must keep a supply of cigars, candies, and fancy articles. In the products of the soda-fountain the ‘cuteness’ of the American is well displayed, and English pharmacists, particularly country ones, might with advantage study the question of supplying American temperance beverages in place of the extraordinary concoctions which one occasionally sees served by them.

In window dressing the American can give the Englishman points. A lavishment is often displayed which would startle an English druggist, for as yet the deadening and stultifying effect of the practice of pharmacy on the human being, as exemplified by the average English druggist, has only commenced to descend to his American confrère. A bicycle artistically made from tooth-brushes, an excellent model of the Brooklyn Suspension Bridge made out of bottles of malt-extract, and a fall-grown cow, stuffed, to advertise a particular beef-extract, are three of the designs seen in the course of a short walk. In advertising his store the American pharmacist is seen at his best. This is largely due to the efforts of two drug-journals—the *American Druggist* and *Pharmaceutical Record* and the *Pharmaceutical Era*. Mr. Martin laid down the dictum that “pharmacy as a trade is a failure,” but in America, at any rate, pharmacy as a trade is not a failure.

Apprenticeship is unknown in American pharmacy. The would-be pharmacist starts either as errand-boy or as clerks (assistant) at the soda-fountain, where he learns what is considered the most important part of the retail drug business. He will commence on a salary of about three dollars a week, outdoors; indoor situations are few and far between. After he has mastered the intricacies of the soda-fountain

he may be promoted to counterman, where he will supply cigars, candies, patent-medicines, and small amounts of drugs. The prescription department is usually a sealed book to him until after some years' service, so that of the better side of his pursuit he knows little or nothing. In the country districts pharmacy may be described in the old expression "*pars minima ipsa puella*." Here the "side lines" of the druggist are so numerous and important that pharmacy is lost, and the youth will emerge ignorant of what pharmacy means. So small is the knowledge obtained by the clerk in his four years' preliminary training, and so valueless has it become, that many of the colleges are considering the advisability of abolishing the requirement of store experience prior to entrance, and of allowing men to study at college and graduate prior to entering a store. Out of forty-eight colleges seventeen have already abolished the requirement, and more will probably shortly follow.

Preliminary experience over, the clerk will next endeavour to secure his licence to practise. This he can do in several ways. In the cities he can go before the State Board of Pharmacy, which grants a licence, after examination, to practise in that particular State only, or he may go to one of the various colleges and secure his degree of Ph.G., which virtually entitles him to practise in a majority of the States. The better class of pharmacists graduate from the colleges. The City and State Boards of Pharmacy in general are extremely lax in their requirements, but the various colleges are more severe, and in the best of these the student must spend three years, attending lectures and doing practical work in chemistry and pharmacy. Many of the colleges are excellently equipped, and they are officered in general by competent men, and the schedule is arranged so that the student need not necessarily give up store-work during attendance at college. In general the lectures are delivered in the afternoon, leaving the student the morning and, if necessary, the evening in which to earn his daily bread. The system of tuition is excellent, and distinctly superior to that followed in the English schools. There are, however, many so-called colleges whose system of education and graduation is nothing short of disgraceful. In Mr. Martin's paper the system described as prevalent in American institutions is prevalent, as far as I can learn, only in the worst schools, and in the diploma mills of the West, the existence of which every American pharmacist deplores. Comparing the New York and Philadelphia colleges with the English School of Pharmacy, I have no hesitation in saying that the American comes first, both in equipment and system of tuition. In particular, there is no trace of the "cram," so prevalent in England. Not that I mean to say that the American institutions necessarily turn out better pharmacists, for that at present they do not; but with the system pursued therein they will, as soon as pharmacy enactments similar or superior to those in force in England are obtained, turn out not only better pharmacists but better educated men. At present, the weak point is the graduation requirement, and until the examining power is vested in a single body, laxity will prevail. American pharmacists recognise and deplore this; but the fact that an institution like the Philadelphia College of Pharmacy can yearly muster some six hundred students who are willing to spend years in study when they could secure the State licence at a nominal expenditure of time and money speaks volumes for the future pharmacist in the United States.

A clerk who has secured his diploma can command a salary of from \$14 to \$20 per week. The best city stores pay the best salaries; the absurd custom of the "Classical" London houses in paying nominal salaries because of the "experience" gained by the assistant is not in accordance with American ideas, and would not for a moment be tolerated. Occasionally a clerk will get as much as \$25 per week, but this is exceptional, \$20 being considered a good salary for a retail druggist's clerk. The manager of one large pharmacy in New York is reputed to get \$3,500 a year, and is probably the best paid employé in retail pharmacy in the world.

The social status of the pharmacist is higher than in England. He is practically on an equality with the medical practitioner. Frequently it is to the pharmacist that the physician looks for help in matters more strictly appertaining to pharmacy than to medicine. In the south and west,

where the professional side of medicine is more or less at a discount, the physician does not deem it unprofessional to enter into an arrangement with the druggist whereby he secures a percentage on every prescription taken to his store. As the original prescription is always retained and filed by the druggist, this is a matter of easy arrangement. The druggist usually supplies his physician with prescription blanks, on which are the words "Take this to So-and-so's Pharmacy." The prescription will often bear, in addition, the words "No substitution allowed on any prescription"; not very complimentary to the druggist, it must be said. Substitution, indeed, is to the average American physician what prescribing by chemists is to the English medical man. The cry of substitution comes principally from the south and west, where the education and knowledge of the average physician leaves much to be desired. Looking over the prescription-books of a large firm recently, I found but six prescriptions out of about 500 which did not call for some proprietary remedy. Should the druggist venture to manufacture one of these from the formula given, instantly a howl goes up of substitution, and the druggist is lucky if he does not get his name published in the local medical journal as a substitutor.

The physicians of the east are in some ways in advance of the physicians of other countries, in that they have reached the conclusion, and are willing to acknowledge, that "Medicine is not an art nor a science, it is an experiment." In their difficulties they often apply to one of the large firms, and will work hand in hand with them trying to obtain some new or improved remedy which will answer in certain cases. In this way many new preparations, in every way excellent, are turned out year by year, and so has originated the "Elegant Pharmacy" for which the large American firms have long been famous. The journals are keenly watched for new ideas and new remedies, and the American physician is willing to try them all in the hope that one may be found which will be of value. Some firms carry this idea to extremes, and will eagerly seize on and "boom" every new chemical "made in Germany," solely from a commercial standpoint. The enterprise of the best class of American firms might well be adopted by some of the Conservative English firms.

Medicine and pharmacy are becoming more closely allied in America day by day. Large numbers of medical men own drug stores and combine medicine with pharmacy, or stick to the latter alone. The examining boards and the pharmacy college staffs are largely composed of men holding medical degrees and though a certain section object to this condition of affairs, the results from such a course are in the main satisfactory, seeing that many of the professors originally commenced as pharmacists, and hold the pharmaceutical diploma as well as the medical.

The advance and betterment of pharmacy are largely handicapped by the foreign element. The German element, curiously enough, is the greatest hindrance, whilst Germans are very numerous, and, as a rule, fairly educated; they to a large extent hold aloof from other nationalities. They form societies, and have organs of their own, and act with the obstinacy characteristic of the race. The discussions at some meetings of the Deutsche Apotheker Verein, of New York, are not edifying. Occasionally we will find one druggist calling another over the coals for seducing away one of his customers, and in general the German Association is the place where the petty quarrels of different druggists find voice. It will be many years before the German, with all his education, is raised to the civilised condition of the American. Pharmacies of almost every nationality are to be found in the United States, from Italian and Russian down to the humble store of the heathen Chinese.

I HAVE been asked (writes a Kettering subscriber) for a "pennoth of liquid for a canary" (liquorice), a bottle of "cross" for coughs (a cough-mixture sold at a travelling bazaar), "incx" powder, "easing pains," "condescended milk," "dog raker," "balloway," "drill water," "julia" rouge, "king wheaten's food," "salts for Christians to take"; while "liquid powder" and penny "tins of glycerine" (*i.e.*, vaseline) are not uncommon requests. One old woman with a cough declared she was troubled with a great deal of "exporiation."

Laboratory Notes.*

By JOHN BARCLAY, B.Sc. (LOND.).

1. A New Product for "Reducing" Essential Oils has been offered for sale in London. It has a "fancy" name, is stated to be of vegetable origin, and to be specially manufactured for the purpose indicated. It is said to combine perfectly with Sicilian and French essential oils. On analysis the following results were obtained:—Sp. gr. at 15.5° C., 0.869; optical rotatory power in tube of 200 mm., -59°; flashing-point (Abel's method), 100° F.; fairly soluble in three volumes of alcohol (sp. gr. 0.820); and on evaporation left a trace of residue. On fractional distillation the following percentages were yielded:—Between 155° and 160° F., 3.5; 160° and 165° F., 55; 165° and 170° F., 24; 170° and 180° F., 9; and above 180° F., 8.5. There was no aldehyde present, and only a trace of ester.

The author concluded that the oil appears to have the characters of a *levo-pinene*, such as is obtained from *Pinus sylvestris*, *Abies excelsa*, *Pinus maritima*, &c. It has a delicate odour, not unlike that of some of the commercial varieties of pine oils. Considerable proportions of it may be mixed with oils of lemon and bergamot without being detectable to smell or taste. Such detection would also be difficult by any of the ordinary physical tests (specific gravity, rotation, &c.) and the importance of having standards, such as the percentage of *Citral* in lemon oil and of *Linalool acetate* in bergamot, is thus emphasized.

2. *Tincture of Strophanthus*.—The comparatively limited use of this preparation is no doubt largely due to the great variation found to exist in different samples. Some experiments were, therefore, undertaken with the view of arriving at a standard for the percentage of strophanthin, which was determined by hydrolysis of the impure strophanthin with strophanthidin which is soluble in chloroform, and can, therefore, be removed and weighed. It was found by experiments that pure strophanthin gives on hydrolysis 36.5 per cent. of strophanthidin—(Fraser gives 36.2 per cent.)—and the strophanthidin percentages found were, therefore, divided by 0.365 and the figures obtained taken as representing the percentage of strophanthin present. The strophanthidin obtained was not quite pure. In assaying the tincture 50 c.c. was mixed with 50 c.c. of water, and the spirit distilled off. The filtered aqueous liquid, after being shaken with chloroform, was digested one hour on the water bath with dilute sulphuric acid. After cooling, the turbid liquid was agitated with three successive small quantities of chloroform, the latter being separated, distilled, and the residue dried below 150° F. and weighed. The following are the results obtained, expressed in percentages, except in A:—

	A	B	C	D	E	F	G
Number of Sample	Sp. gr. of Tr. at 15.5° C.	Extrac-tive	Alco-holic extrac-tive yielded by seeds (calculated from B)	Water soluble extrac-tive in tincture extrac-tive (cal. on tr.)	Stroph-an-thin obtained by treating aqueous extrac-tive with absolute alcohol	Stroph-an-thidin	Stroph-an-thin calculated from stroph-an-thidin
1	.842	.674	13.4	.622	.417	.1493	.410
2	.8425	.73	14.6	.361	.412	.1538	.421
3*	.842	.59	11.8	.5176	.470	.1134	.310
4	.8415	.52	10.4	.499	.472	.1208	.413
5	.842	.526	11.0	.512	.360	.109	.293
6	.843	.557	11.6	.519	.385	.1296	.355
Mean	.842	.60	12.13	.552	.42	.1344	.368

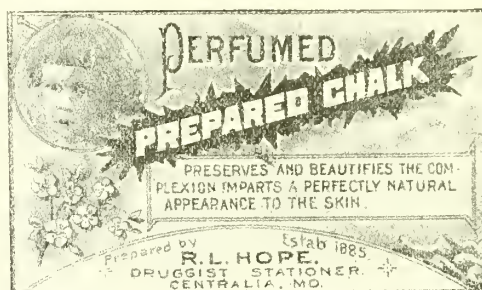
* Brown seeds.

* Abstract of a paper communicated to the Midland Pharmaceutical Association on Tuesday, November 17.

GINGER-GROWING seems to be a success in the German colony of Cameroon (W. C. Africa). Last year 5½ cwt., the first crop, was sent to Hamburg, and realised good prices. Large plantations of Jamaican and Canton ginger will be made this year.

American Notions.

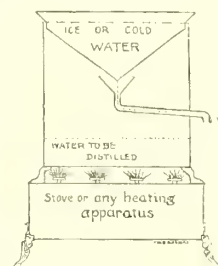
WE cut a label from a list published by the Pictorial



Printing Company, of Chicago, which may give an idea.

A SIMPLE STILL.

Dr. A. J. Harris submits the subjoined sketch of a still to *Popular Science*. He gives no particulars of it, but it scarcely requires any. The still can be used with a gas or oil stove. The condenser containing ice or cold water should be made to fit the lower receptacle tightly, the same as a cover of an ordinary tin pail. It will be readily seen that the steam rising from the water underneath coming in contact with the cooled surface above condenses and runs down the cone-shaped condenser drop into the small funnel. The still can be used to make aromatic waters by enclosing the drug in a cloth and dropping it into the water to be distilled.



NEW STYLES OF BOTTLES

are difficult to get, so we reproduce two from the other side. The shop-round is called the "Roman Crown," and is made by the Dawes Manufacturing Company, of Pittsburg, Pa. It is said to be the only bottle which you can handle without displacing the others on the shelves, while all the other



bottles are close up, leaving no space between each other at the base. The bottle has recess-labels. The second illustration is a perfume-bottle of a shape which we have not seen before. Americans like London perfumes, hence the name on the label.

GOLD MEDALS 1884-1885-1886-1888.

"SANITAS" DISINFECTANTS

TRADE
MARK.

"SANITAS" EUCALYPTUS PREPARATIONS.

Kingzett's Sulphur Candles and Sulphugators,

Kingzett's Drain Testers,

Preserved Peroxide of Hydrogen,

Mercuric Bactericide, Eucalyptus Oils.

L. G. B. Corrosive Sublimate Pellets; "Okol" and "Creocide" Fluids and Powders; Chloride of Zinc; Carbolic Fluids, Powders, and Soaps; Soluble Carbolated Creosote; Moth Paper; Weed Destroyer, Sheep Dips, &c.

THE SANITAS CO., LIM.

BETHNAL GREEN, LONDON, E.

ELLIS'S TABLE WATERS

"Well charged with gas, and in every respect of the very best quality for drinking."—
PERCY F. FRANKLAND, B.Sc., F.C.S.

"Typically Perfect."
—Medical Press.

SOLE ADDRESS— [1]

R. ELLIS & SON, RUTHIN, NORTH WALES.

London Agents: W. BEST & SONS, Henrietta Street, Cavendish Square

SPRATT'S PATENT Dog Cakes



SUPPLIED TO

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EXPEDITION.

Non-Freezing at Zero.

NEWFOUNDLAND COD LIVER OIL.

The Finest Medicinal Oil made.

In 25-Gallon Tin-Lined Barrels only.

PRICE AND SAMPLE—

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PLEASE GET OUR PRICES.

JOHN MOSS & COY.

Galen Works, Wilson Street, LONDON, S.E.

COD LIVER OIL

PATENTS, DESIGNS, & TRADE MARKS.

Searches effected through the Classified Volumes of the Society free of charge. Registrations throughout the world. Advice as to infringements preliminary to litigation.

APPLY—

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TRADE MARK REGISTRATIONS.

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Moderate Inclusive Fees.

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HORLICK'S MALTED MILK

FOR

Infants & Invalids.

39 Snow Hill, E.C.



"Consequently, gentlemen, the unhappy pharmacist is in daily peril of the police-court. To avert this disgrace I know of only one safeguard—ITROSYL. Enclosed in hermetically sealed tubes or cartridges it is impossible for ITROSYL to lose strength. Each one-ounce tube is sufficient to make a pint of *Sp. Ether. Nit.* of the maximum official strength."

Editorial Comments.

OUR "DIARY."

At the beginning of next week our subscribers at home will receive their copies of THE CHEMISTS' AND DRUGGISTS' DIARY for 1897. Colonial and foreign subscribers will have received their copies before they read these lines. We may note that those whose subscriptions expire with this issue of the C. & D. are not entitled to the 1897 DIARY; so they should renew their subscriptions without delay if they wish to be sure of the DIARY. In several respects the new DIARY is a remarkable one. Its outside measurement is

11½ inches long by 8½ inches wide, as compared with 10½ inches by 7½ inches which our DIARIES have been since 1872, when it was enlarged from the octavo sizes of the first three issues. By the present enlargement the new DIARY is brought to the page-size of the weekly issues of THE CHEMIST AND DRUGGIST, and the immediate result is that better effect is given to the advertisements, which now have that ample margin desired of book-lovers. The enlargement has given us the opportunity of effecting several improvements in the get-up which, we hope, will add to its utility. Greater space has been given in the blank diary pages by removing the border, suppressing what are known as the "events," still retaining, however, the Sunday lessons, which appear to meet the needs of many in the drug-trade. Recognising that even druggists have vision, and many of them spectacles, we have adopted a larger type than before, but by increasing the number of pages have retained all the features for which THE CHEMISTS' AND DRUGGISTS' DIARY is noted. What we aim to supply in these pages is information upon matters about which we have daily correspondence from members of the trade, or which, in other words, retailers and wholesalers frequently want to know. Thus, we tell in fresh style how trade-marks should be registered, and patents obtained; the laws that are interesting to the drug-trade are epitomised, and hints given upon those points which are not clearly expressed in the various Acts, but which are of importance to druggists. We may note especially the laws referring to the sale of proprietary medicines and the sale of adulterated drugs. The sale of spirits, wines, &c., is specially dealt with, and we would here urge the importance as a corollary of that dry-looking section, "Excise Licences and Duties," which contains numerous fiscal notes. We insert this year a rather long article on the sale of poisons, and have appended to it a table of antidotes. These and other legal contents make the DIARY a veritable druggists' lawyer. The treatise in the DIARY is entitled "The Dispensers' Formulary," and we shall say no more of it at present than that it contains between 700 and 800 recipes, the largest number that has been inserted in any of our DIARIES.

The work of our publishing department has been crowned with such gratifying success that the 1897 DIARY far exceeds any previous one in bulk of advertisements and attractiveness thereof. We cannot at present say all that we should wish regarding the advertisements, or point out any which particularly deserve notice, because later on we shall have to deal with our subscribers' opinions, but it will be seen that several firms have taken the DIARY at its highest utilitarian point by inserting in it price-lists of their goods which may be consulted all the year round. We who contribute the smaller section of the DIARY are not so conceited as to imagine that the so-called literary matter has the greater interest to our subscribers; indeed, we know that the gentlemen who write advertisements are amongst the cleverest writers of the day, and that what they say always attracts. They know how to catch the eye; how to coin a phrase which will last for a century; how to state a fact concisely and keep on stating it without boring people; and it has given us real pleasure to look through our DIARY pages and read what the advertisers say to the Trade. All that we want now is to hear what the Trade have to say about the advertisers and their advertisements, so, in accordance with our custom, we have again inserted in each copy of the DIARY a coupon entitling the recipient to a chance of ten guineas, which we offer in prizes for the most correct answers to the following questions:—

1. Whose advertisement is best calculated to promote business?
2. Which proprietary article do you find most prescribed by doctors?

3. Which proprietary article do you find most in demand by the public?
4. Which illustration or design do you consider most attractive?
5. Which advertisement, occupying a page, do you consider the best?
6. Which advertiser, who has less than a page, utilises his space to the best advantage?
7. Name an article which deserves to be better advertised than it is.
8. Indicate some advertisement to which you have already responded, or which you are likely to buy from.

The questions refer exclusively to the advertisements in the DIARY. The answers to them are to be written on the post-card which forms part of the coupon and returned to us before December 31, but foreign and colonial cards may be posted up to January 20, 1897. We reserve the right to divide the money as we please, but we hope to do it to the satisfaction of competitors; and we trust there will be many of them, since the post-card is so convenient a method of replying. The principle upon which we adjudge the replies is to compare each post-card with the total vote, while in cases of equality amongst competitors, the date upon which the post-cards are posted will assist us in deciding the claim so far as home subscribers are concerned—colonial and foreign cards are treated separately. If subscribers have not time or inclination to fill in the card, we do not object to their passing on the coupon to a member of their family or business staff. Our experience is that these delegated votes are frequently the most valuable, because we get focussed in them the combined wisdom of several people; and the more the DIARY is consulted the more shall we and our advertisers like it.

UNREMUNERATIVE BUSINESS.

WE have heard of some objections being raised to the letter addressed by forty of the chemists of Plymouth and district to the proprietors of Scott's emulsion, copy of which we published last week, page 738. Messrs. Scott & Bowne informed the Plymouth chemists that they were about to bill the district, and they intimated that it would be advisable, therefore, that they should have a sufficient stock of the emulsion to meet the expected demand. It was to this intimation that the forty chemists replied. They noted the fact that if they sell the preparation at all they must either do so at a gross profit of barely 5 per cent.—which means at a net profit of as nearly nothing as possible—or they must submit to be under-sold. And they protested against being expected to be interested in a business of that character. The view was undoubtedly a mercenary one, and perhaps it was not expressed with the most perfect diplomatic skill. Moreover, the veiled threat, we are told, conveyed in the letter could only have the effect of irritating the firm who had courteously addressed them, and, lastly, some other critics say, it will never do for chemists to mutilate their own businesses in order to spite those who do not fall into line with their latest conditions. We perceive a good deal of force in all these arguments, but, bearing them all in mind, our sympathies go a long way with the Plymouth chemists. The principal weakness of their letter, in our opinion, was that it too clearly indicated divided counsels among themselves. We judge that some of the forty advocated that Scott's emulsion should be resolutely boycotted, but that this opinion was by no means unanimous. Consequently, the draftsman of the letter could only fire blank-cartridge—a proceeding which the first Napoleon condemned as stupid and unnecessarily cruel.

Rather, however, let us look at this Plymouth manifesto as a preliminary skirmish. Sooner or later a sharp contest will have to be fought. Chemists will have to consider well how to deal with Messrs. Facing-both-ways & Co. We are not now referring to any particular firm. Certain it is that

the paltry profit available on any of the unprotected articles is not good enough to prejudice chemists in their favour, nor would an extra penny or two added compensate them for the discredit of being undersold in their own business, and for getting the reputation of being dear. Far better is it to decline the business altogether. This will not be effective till forty here, there, and elsewhere agree on such a course. But when that time comes—and it is coming—when, as one of our correspondents once said, a medicinal preparation can be advertised as “sold by no respectable chemist,” the proprietors will begin to look about them. They may lose their tempers at first, but they will come to a point where they will find it pay better to keep them; and this point will be reached the sooner if chemists will be reasonable in their claims, and conciliatory in their attitude, but firm in their resolution and, above all, united in their action.

SITUATIONS WANTED.

THE relationship of chemists to their assistants, and of assistants to their employers, is a topic of perennial interest, and it is, too, a subject of vital importance. There is an occasional outbreak of the slumbering fires of discontent on one side and the other in our correspondence pages, but on the whole there is reason to believe that the contracting parties get on very well together in their mutually advantageous positions.

A pretty careful study of THE CHEMIST AND DRUGGIST SUPPLEMENT, which salmon-coloured sheet has become such a familiar messenger in the drug-trade, has suggested some curious statistical theories to one of our correspondents. He has tried to discover from it how often the average assistant changes his situation. “Let us assume,” he says, “that there are 20,000 chemists qualified and unqualified engaged in the drug-trade of the United Kingdom. Say that 8,000 of these are in business for themselves. We have therefore 12,000 assistants qualified and unqualified either in or out of situations. What proportion do the ‘out-of-works’ bear to the rest? I find that somewhere about eighty advertise in THE CHEMIST AND DRUGGIST weekly, and I may perhaps estimate that every week there are 100 either out of work, or about to become disengaged, who do not advertise. This gives an average of 180 out of employment at any one time. One hundred and eighty in 12,000 is not an excessive number, but it is probably beyond the actual ratio, for many of the best men seeking berths advertise before their engagements terminate. Then, too, some of those who advertise are ‘chronics,’ including the useful temporaries, and these should not be counted among the out-of-works. But if this be anywhere near the correct figure, how often do the employed change their berths? That question, or rather the answer to it, should prove a fair test of the relationship existing between masters and men. In getting at this we have to remember that every vacant berth does not indicate a man dismissed or resigned for a fault on either side. Some leave situations to enter business for themselves; a few die or break down in health; others leave the trade, and so on.

“Putting all these cases aside, and remembering too that many men advertise more than once, it cannot be reckoned that more than a hundred assistants change their situations per week. That would amount to, say, 5,000 out of 12,000 per annum, a calculation from which it may be deduced that the average period of each situation is nearly two and a half years.

“Probably this is a very favourable record compared with other trades. These figures would be even better but for a class of masters and of men, not numerically important, but

who swell the percentage of charges to an extent altogether out of proportion to their numbers.”

We give this calculation for what it may be worth, without either endorsing or disputing it. It is evident that there are not sufficient bases for exact estimates, and in any case the point is not of much importance. But our correspondent, whose experience in modern brisk businesses has been exceptionally large, goes on to criticise the assistants with whom he has come in contact in a way which may be described, as free to use a mild expression. He is himself a qualified chemist, but he declares that in an experience of some hundreds of all sorts he has found the legally unqualified to be the most useful. He places the Minor men second, and the Majors, he says, are a poor third. “Why,” he asks, “do we so often find the large drug-stores, each owning many shops, and controlled by keen, shrewd business-men, placing an unqualified man at the head of each of their branch shops, and making the qualified assistant a subordinate, with the title of ‘dispenser’? Solely because the unqualified assistant is a better man of business, more energetic, broader in his ideas, and freer from cranky notions as to what he may or may not do without compromising his professional dignity. Put two men behind a retail counter, one qualified and the other not, and it will be found, in nine cases out of ten, that the unqualified will serve half as many again customers and give equal satisfaction. Somehow, the man with a diploma seems to have so much more to say to the customer—so much learning to air—that before he has said good morning to his first customer the other man is just finishing off his second!

“It has been observed that assistants who up to, say, 25 years of age have always been in a quiet business are of little use in a large, busy trade. They think when they have prepared and sold an eighteenpenny bottle of medicine they have done a big thing, and are entitled to a rest. But if they come into a quick business immediately on completing their apprenticeship, before their habits are set, they usually develop into smart, fine men of business.

“Another notable point is the reluctance that employers seem to feel in engaging assistants over the age of 35. According to my observation, the chief cause is C_2H_5O . A large proportion of men who remain assistants after that age contract at least a mild alcoholic habit. I do not mean that they are ever obviously the worse for liquor in the shop. This only occurs in rare cases. But it is an undoubted fact that the habitual use of alcohol has a depressing effect on a man's energies, and he usually does just as much work, and no more, than he is obliged to do.

“In a quick trade an assistant is valuable just in proportion to the energy and working-powers he displays: hence an abstemious man is worth far more than his opposite. And as the abstemious assistant over 35 is the exception rather than the rule, his services are at a discount.

“The stores are the largest employers of qualified men, perforce for the sale of poisons, and it is fortunate for that class of assistant that this is the law, because the average chemist who requires only one assistant usually prefers an unqualified man. Why? Not solely that his salary is rather less. The few pounds of difference in an ordinary business would not be worth serious consideration. In my opinion the principal reason is that chemists find the unpassed man is more pliable, more willing to do what work comes to his hand, and less particular in discovering tasks that are *infra dig.*, and which must, therefore, wait to be done by the errand-boy. I knew one qualified man who gave notice and left a situation because, being dispenser, it was his duty to fill up, in his spare time, the shop bottles, &c., from the stock vessels in the rooms behind. He

did not pass his examinations, he said, to mess his hands with rhubarb. Another left because he had to bring forward the goods with which to dress the window. That was porter's work, he said. In putting up packets of powdered drugs, and finishing small bottles of spirits of nitre, sal volatile, &c., ready for sale, the qualified man is often almost useless. Instead of filling up his spare time he will stand looking out into the street, or reading the newspaper. Numbers of qualified men have lost good situations solely because they would not do enough work to earn their salaries. Put them to the counter and they will serve customers, but will do nothing else between times, except with a grumble. Put them to dispensing, and although on a quiet day there is not half enough work to fill their time they consider it gross ill-neighbourliness to be asked to make a few specialities, or to take a turn at the counter. The natural result is a preference on the part of employers for unqualified men."

There is enough truth in these observations in particular instances to make it worth while to bring the allegations before those charged. But we think our contributor is disposed to generalise from particular instances a little too readily. However this may be, the moral is true enough, that the chemist's assistant of the present day must be prepared to earn his salary if he expects to take it.

CARDAMOMS.

It is a good many years ago since cardamoms have been so dear as they are to-day. In fact, there has been no such scarcity of the drug since Ceylon commenced to supplant Southern India as the principal source of supply. That was about twelve years ago. So recently as 1884 the bulk of the cardamoms seen in the London market were the produce of the native States of Travancore and Cochin, while smaller but regular consignments were also received from other portions of the Malabar coast. The Maharajah of Travancore used to draw a handsome revenue from his cardamom-monopoly, which was mainly based on the simple plan that the growers must consign the whole of their crop to a specified port—Aleppey—and there sell it to the officials of his Highness. Cardamom-culture by Europeans was discouraged at Travancore in those days. We believe that it is now permitted, and that a tax has been substituted for the old monopoly system. But the low market-rates of the past few years have taken the gilt off the industry in Travancore, just as the former high prices stimulated by the monopoly-system encouraged the spread of cardamom-culture in Ceylon.

Before 1884, Ceylon did not export any cardamoms worth mentioning, and those that she did send abroad consisted mainly of the long, greenish-brown, three-sided arched fruit which we know as wild cardamoms. This variety is but rarely seen now, and when a few cases appear on the market they are always well competed for by German exporters, for the seeds have a very distinct aroma, and are prized in Southern Germany for confectionery and, we believe, as ingredients in liqueurs.

In the early eighties, European planters in Ceylon commenced to turn their attention to cardamom-growing. The cultivation of that product is rather easy, and was, at that time, very profitable. Moreover, the soil of Ceylon proved to be excellently adapted to the raising of the drug, especially at altitudes of between 3,000 and 4,000 feet. The process adopted in Ceylon for drying and bleaching the fruit was also much better than that generally used in India, and as a result of all these favourable circumstances Ceylon cardamoms quickly became popular in the London market. During the first years of prosperity of cardamom-growing in

Ceylon, it was calculated that certain small plantations in good positions yielded a year's profit of from 200% to 300% per acre. Naturally, the thing was overdone. In 1880-81 there were about 1,200 acres under cardamoms in the island. The entire exports amounted to about 16,000 lbs. The highest price paid for Ceylon cardamoms in London in that season was 9s. 1d. per lb. In 1884 the cardamom area had risen to 4,000 acres, and the exports to 233,056 lbs.; but the average price had fallen to less than one-half that of 1881. The output of Ceylon cardamoms was then estimated at about 20 per cent. of the world's production. Since then Ceylon has shipped from 300,000 to 400,000 lbs. a year, and the present season appears to have been the first in which the demand has outrun the supply.

The present scarcity seems to be due rather to a failure of the Indian crops than to a serious falling-off in the Ceylon output. India is a very large consumer of cardamoms, and imports, even in ordinary times, a considerable proportion of the Ceylon crop. This season, owing to the failure of her own harvest, she has taken more than ever, and as London at first declined to believe in the possibility of a cardamom "famine," and would not pay the prices that could be obtained in India, it now finds itself with a depleted stock, a strong demand from America and the Continent—the consuming season being at its height—and uncertain prospects of sufficient shipments for two or three months to come. No wonder, then, that values have already more than doubled, and that there is thought to be no prospect of a serious decline. The new Ceylon crop, which generally begins to arrive in January, will, no doubt, be hurried forward with unusual speed this year, and it seems likely, therefore, that the Ceylon cardamoms of 1897 will fall below the average in quality. It is somewhat strange, by the way, that the present scarcity of the ordinary commercial varieties of cardamoms has not led to an attempt to introduce upon our markets the Siamese cardamom, of which huge quantities (much larger than the produce of Ceylon) are shipped every year to Singapore and China. Though the fruit differs greatly in appearance, the seeds of this variety, the true *Anomum cardamomum*, greatly resemble those of the Malabar kind.

IGNORANCE AT A PREMIUM.

The annexed advertisement appeared in the *Yorkshire Post* of November 21:—

DISPENSER wanted: knowledge of dispensing not necessary.—Address B., 121, The Yorkshire Post, Leeds.

Perhaps it would not be uncharitable to imagine that a proper knowledge of dispensing would be rather in the way than otherwise, and too costly for the purposes of the advertiser.

LIBELLING A RIVAL.

The case of *Sharwood v. Gordon & Dilworth (Limited)* should warn proprietors of specialities, who are sometimes a little too ready to allege dishonesty against their rivals. The tastes and luxuries, the diseases and difficulties of the great purchasing-public, cannot be monopolised by any firm. We are all at liberty to try our hands on these, the only restriction being that we must not infringe any patents or registered trade-marks, or so imitate other people's style of get-up as to lead to the belief that our article is theirs. But the point of this case is that the proprietor of one speciality must be careful how he refers to a rival's product as an illegitimate imitation of his own. That is a matter for the Court to say after trial. If he himself says it too distinctly before that trial he renders himself liable to an action for libel, which, as in the instance before us, may be successful.

AMERICAN AND ENGLISH ASSISTANTS.

The remarks which London assistants made upon Mr. Gane's paper on American pharmacy, which is printed on page 787, showed that they may be none the worse for further instruction. Clerks, classic houses, and salaries were the principal topics, and it is significant that none seemed to be aware that a clerk is an assistant. It was thought, too, that there are no classic houses in the United States—i.e., the counterpart of such pharmacies as Bell's; there are a few, nevertheless, in the Eastern States who have signs that were painted half a century ago, and would not alter their interiors though a fortune were given them. On the matter of salaries, Mr. C. Morley remarked, "It is really only a question of supply and demand. Men are willing to go to the classic houses for the sake of obtaining experience, and it is quite in human nature that employers should take advantage of it." As far as our information goes, the highest salaries are paid by the best houses in England as well as in America; by "best houses" we mean those who want the best possible service and are willing to pay for it—and that generally obtains. There are probably not a dozen pharmacies in the kingdom where salaries lower than the average are paid because the experience gained in them is considered to be equivalent to the difference. That practice is a relic of the "improver" days, and now the rule is almost universal that to get the best service one must get the best men and pay them the best salaries.

RINDERPEST MICROBE.

Dr. Alexander Edington, the Cape bacteriologist, who is reported to have discovered the specific microbe of rinderpest, is a pharmacist by training, as well as a medical practitioner. He served his apprenticeship with the late



Mr. John Mackay, Edinburgh, and while afterwards acting as an assistant to Mr. Alexander, Canongate, commenced his medical studies. His career in the Edinburgh University was exceptionally bright, and he gained several scholarships. After graduation as M.B., C.M., he was appointed to the Syme Surgical Fellowship of the University, which enabled him to prosecute several bacteriological investigations which he had commenced before his

graduation. Amongst his discoveries was the bacillus of scarlatina, in 1887, but his observations thereon have not led to any practical issue. He also studied several problems for the veterinary department of the Indian Government, and this brought him into touch with questions which were exercising the Cape Government when they resolved, five years ago, to appoint a bacteriologist at 1000*l.* a year. His application for the appointment was endorsed by testimonials from Scotch professors and English and German bacteriologists, who spoke highly of his competence. If his rinderpest-microbe should turn out to be the genuine article the discovery has come just in time to permit Dr. Koch to take the next Cape steamer home to Europe. Dr. Edington has been tracking the bacillus of horse-sickness for some years without success.

THE BOVRIL BONUS.

The *Times* on Tuesday printed a letter from "Grocer" respecting the new Bovril Company, which was apparently intended to depreciate it. "Grocer" told the *Times* that

he, and it may be presumed others besides himself, had been offered a special bonus on his sales of bovril during October, on condition that he allowed bills of the product to be affixed to his windows during the four weeks. The insinuation was that this was an unfair method of forcing the sales just before the new company was launched. The charge seems to us to be ridiculous. Bovril may or may not be worth the 2½ millions which the public have paid for it; but we all know it would be worth nothing like that sum if it were not continuously and extensively advertised. The method of advertising which "Grocer" reveals strikes us as one of the most effective and probably one of the cheapest that could be adopted. Retail vendors with prominent shop-windows have something very good to sell, and what is there illegitimate if the proprietors of a saleable article agree with them to hire such windows for publicity? So long as "Bovril" only used dead walls and newspaper-pages for their announcements there was nothing wrong. No one criticises them for developing their advertising so as to increase their trade. But because they have had the smartness to strike out a new line of advertisements, the *Times* and its correspondent see something in their conduct which shocks them. We quite fail to appreciate the immorality, and should like to see shop-window advertising developed into a big feature.

ETHYLENE DIBROMIDE AS AN ANÆSTHETIC.

At the celebration of the Jubilee of Anæsthesia at Boston, Mass., on October 16, Lord Playfair stated that Sir James Y. Simpson was one of his most intimate friends, and one day Simpson came to him saying he was disgusted with chloroform, and would thank him for the discovery of a satisfactory substitute. In a few days Lord Playfair said he had found the required substance in dibromide of ethylene. Simpson wished to try this on himself forthwith, but Lord Playfair insisted on trying it first on rabbits. The next day Simpson appeared, with his wife, at Lord Playfair's laboratory, propped himself up with two chairs, and asked Lord Playfair for the dibromide. Mrs. Simpson advised her husband to see how the rabbits had fared under the treatment before he applied it to himself. This was done, and "when the attendant came in," continued Lord Playfair, "we saw him holding by the ears two rabbits—perfectly dead!"

OTTO.

When shall we hear the last about otto-of-rose testing? We print two papers this week which leave us where we were before our Bulgarian correspondent and "An Old Hand" gave us of their wisdom. Mr. Conroy's observations on the matter show that the figures given by the former admit of from 55 to 158 per cent addition of geranium oil, without detection by chemical tests, and he concludes that there is nothing better than the nose. Mr. John C. Umney, on the other hand, says that chemical tests are all right if they are proper tests applied properly, and he favours a much closer and higher crystallising-point than our Bulgarian correspondent—viz., 20.4° to 21° C., instead of 18.3° to 20° C. Mr. Umney also favours a higher specific gravity (0.855 to 0.860, as opposed to 0.850 to 0.860), which would admit of less adulteration with geranium oil, and he shows that determination of the alcoholic percentage is a crucial test. It is obvious, therefore, that chemical methods are not worthless, however good the nose may be. It is a mark of our conservatism that we insist upon having solid otto of rose. Yet the stearoptene is worthless, and positively inconvenient in many cases. If it were removed it would not be so easy a matter adulterating the otto. We therefore revive the suggestion, made in our columns by Mr. T. B. Groves several years ago, that a stearoptene from otto should be put on the market.

The Characters of Otto of Rose.

BY JOHN C. UMNEY.

IT has been freely stated that the odour test is more reliable for determining the purity and commercial value of otto of rose than any chemical or physical characters. To put such a statement to the test, specimens of otto of rose (Turkish) with the choicest fragrance, of this year's distillation, were selected. It was thought necessary, with this object in view, to examine the stearoptene and liquid constituents of these various oils. The stearoptene was separated by the removal of 30 per cent. of the oil by distillation under reduced pressure, and the residue, solid when cooled, dissolved in chloroform and precipitated by addition of absolute alcohol, and purified by repeated washing. By this means the stearoptene was obtained free from odour, and was found to melt at 34° C. The specific gravity at 15° C. was 0.866, whilst at 40° C. in a liquid condition, its specific gravity was below 0.800, owing to the great expansion. Its melting-point is slightly higher than that previously noted by me—viz., 33° C.—and that recorded by Plückiger. The separated liquid portion of the oil, which showed no sign of turbidity even at -10° C., had a specific gravity of 0.881 at 15° C., or 0.873 at 30° C. The proportion of the alcohol, or alcohols, present in this portion when determined by the acetylation process, and calculated to a formula of $C_{10}H_{18}O$, was equal to 84.0 to 84.5 per cent.

Specific Gravity.—Being mindful of the difference in the specific gravities of the stearoptene and liquid portion of the otto, it is evident that the specific-gravity test is a fairly reliable indication of the proportion of stearoptene present, and examination shows that the specific gravities of the choicest ottos vary from 0.856 to 0.860 at 30° C. (this temperature is the most convenient for observation). The presence of geranium oil raises the specific gravity considerably, and samples having a specific gravity of 0.861 and upwards should be viewed with suspicion.

Melting and Crystallising Points.—The exact points at which the ottos crystallise after melting, or melt after solidification, are not easy to determine, the rapidity of cooling and warming having considerable influence on the readings obtained. Working with thermometers graduated to one-tenth of a degree C., the finest ottos crystallise at 20.4° to 21° C.—a higher temperature indicating excess of stearoptene, and a consequent weakening of odour value.

Percentage of Stearoptene.—Comparative experiments have been recorded by Hanbury on the percentage of stearoptene present in ottos of rose of different countries by treatment with definite volumes of alcohol (specific gravity 0.838). The actual percentage may be more accurately determined by careful fractionation under reduced pressure, the portion not distilling below a temperature corresponding to 240° C. at ordinary pressure being precipitated by alcohol from chloroformic solution. Determined by this means, the finest ottos, having specific gravities of 0.857 to 0.859 at 30° C., and crystallising points of 20.4° to 21° C., were found to contain 16 to 18 per cent. of stearoptene.

Determination of Alcoholic Constituents.—The determination of the percentage of alcoholic constituents by the acetylation process affords most useful results in the examination of ottos of rose. In the otto having the finest odour an alcoholic percentage (calculated on the formula $C_{10}H_{18}O$) equal to 71 to 72.5 per cent. is indicated. An abnormal stearoptene percentage reduces this figure materially (see No. 5), whilst admixture with Turkish geranium oil, which usually contains almost 85 per cent. of alcohols, determined by the same process, raises the percentage considerably, some grossly-adulterated samples (Nos. 7 and 8) being as high as 77 to 78 per cent.

By the application, then, of these physical and chemical tests to a sample of otto of rose, it is quite possible to determine its quality, and although it would be possible to mix with an otto of abnormally high stearoptene percentage Turkish geranium oil to fit the characters required, such a mixture cannot possibly escape detection, even by odour alone. On the other hand, an oil with such an abnormally low stearoptene percentage as to render its classification by these means a difficulty, is not by any means likely to be met with.

To summarise, Turkish geranium oil raises the specific gravity and the proportion of alcoholic bodies present whilst it naturally lowers the crystallising point and stearoptene percentage. The characters of the finest otto of this season's production are as under, and may be accepted as standards of excellence:—

Specific gravity at 30° C.	0.856 to 0.860
Stearoptene percentage	16 to 18
Crystallising point	20.4 to 21° C.
Alcoholic percentage (by acetylation process)	71 to 72.5

The following table contains the results of this examination:—

	Sp. Gr. at 30° C.	Crystallising Point	Approximate Percentage of Stearoptene	Percentage of Alcohols Calculated to $C_{10}H_{18}O$
No. 1	0.8566	20.9° C.	18	70.1
No. 2	0.8599	20.4° C.	16	72.3
No. 3	0.861	20.0° C.	14	73.1
No. 4	0.859	20.6° C.	16	72.3
No. 5	0.8560	21.7° C.	19.5	69.2
No. 6	0.863	19.4° C.	12.5	75.6
(impure)				
No. 7	0.868	18.7° C.	10	77.6
(impure)				
No. 8	0.868	18.9° C.	10	76.6
(impure)				

A Note on Infusum Cinchonæ Acidum.

By HERBERT BRIDGES.

SOME time ago, whilst examining this infusion, it occurred to me that an examination of infusions made from Nos. 20 to 60 powders in order to determine which was the most satisfactory preparation, might prove of interest, and that the results of my experiments are so will be seen from what follows. The factors determined were—(1) the amount of dry extractive, and (2) the total alkaloids in 10 oz. of infusion. Half-hour and one-hour infusions were prepared from Nos. 20, 40, and 60 powders, each infusion being filtered through paper, after thoroughly cooling, before estimating, and so obtaining in the cases of the No. 20 and No. 40 preparations perfectly bright filtrates. The powders used were specially sifted from one parcel of ground selected bark.

The following is a tabulated statement of the results:—

No. of Powder	Time of Infusion	Dry Extractive	Total Alkaloids
20	1 hour	47.5 gr.	7.5 gr.
20	1 hour	49 gr.	8 gr.
40	1 hour	37.5 gr.	5 gr.
40	1 hour	41.25 gr.	5.5 gr.
60	1 hour	56 gr.	7.5 gr.
60	1 hour	60 gr.	7.5 gr.

In appearance the No. 20 powder infusions were the best. The No. 60 ones could not be filtered bright, owing, doubtless, to the high extractive in them. Reviewing these results, it is clearly evident that the one-hour infusion from No. 20 powder was the most satisfactory preparation.

For accurate purposes it was, perhaps, unsatisfactory that the powders should have been obtained from a stock powder; but further experiments made with powders obtained from one piece of selected bark corroborated the first results fully. The following are the second results in detail:—

No. 20 Powder.—Half-hour infusion: Dry extractive = 55 gr.; total alkaloids = 8.75 gr. One-hour infusion: Dry extractive = 57.5 gr.; total alkaloids = 10 gr.

As might be expected from such high results, these infusions were in every way excellent. In appearance and flavour they were by far the best preparations of the whole series.

No. 40 Powder.—Half-hour infusion: Dry extractive = 52.5 gr.; total alkaloids = 8 gr. One-hour infusion: Dry extractive = 52.5 gr.; total alkaloids = 8 gr.

Reply to the Cutters' Circulars.

THE following letter, signed by the retail members of the Executive of the Proprietary Articles Trade Association, has been sent to proprietors of and wholesale dealers in specialities, as a reply to the circular-letters which have been recently sent to those firms by Messrs. Boot, of Nottingham, and Day, of Southampton:—

SIR,—You have probably received from one or two cutting firms a circular in which the anti-cutting movement is adversely criticised, and in which you are asked not to support our Association. With due deference to the long experience and great enterprise of these firms, we would respectfully suggest that there is another side to the question. With some of the statements made, and most of the inferences drawn, we entirely disagree. The remark that "old-fashioned chemists" ardently wish the prices of proprietary articles to be raised in order that the trade in them might be destroyed altogether is absolutely untrue. The great bulk of retailers are as willing now as they were twenty years ago to sell proprietaries if only they could be sure of getting a reasonable profit—that is to say, sure of the articles not being cut, and of not having their business damaged by the underselling by large stores. We would here call attention to the suggestion made by our opponents that it is the "small old-fashioned" chemists, who want abnormal profits, who are at the bottom of this movement. So far from this being the case, we may inform you that the retail section of our Association already comprises a large number of grocers and store chemists, who, as far as "up-to-date" methods are concerned, will hold their own with any of our opponents, and that, as an Association, we only ask for a reasonable profit—for a profit below which no trader, big or little, can do justice to your articles. Another statement by the cutters is that the worst substitutes in the trade are the smallest men. At a recent anti-cutting meeting of chemists in the West-end of London, one of the largest and most enthusiastic meetings of chemists ever held in England for any purpose, it was stated by Mr. Milne, chemist, of Brixton, that he had formerly been an employé at three of the largest stores in London, that it was the custom at each of them to allow the assistants a commission on all the private preparations of the establishment sold to customers who inquired for well known proprietary articles, and that in this way he had earned as much as 50s. per month. Mr. Milne's integrity is beyond dispute. Assuming an average commission of 2½ per cent., and also an average of only half the amount of Mr. Milne's monthly commission, it means that 600% worth of advertised goods were prevented from reaching the public by one assistant at one store in a year. Multiply this by all the assistants at all the stores, or even 75 per cent. of them in the country, and a total would be reached which would be something appalling. The cutters claim that the stores sell three-fourths of all the proprietaries sold. If this is true, it follows that they have the opportunity of doing the proprietors at least three times as much injury as the other traders. We enclose an article written by the Editor of THE CHEMIST AND DRUGGIST from which you will see his unbiased opinion on the matter. Mr. Gilligan, of the Liebig's Extract of Meat Company, stated at the meeting of the trade at the Grocers' Exhibition that in the experience of their firm the large stores were by far the greatest offenders in the matter of substitution. We would also respectfully point out to you that it is not so much a question as to whether the stores or the ordinary retail trade does the substituting, but the cause of it. There can be no doubt that the cutting houses are responsible for all the substitution which results from the fact that they have made the trade in your articles unremunerative. We are certain that in the aggregate under the reformed system you would find that your business would greatly improve. We think that the 31,500 holders of licences would, in the main, prefer a fair profit rather than the present halfpennies and farthings, and would interest themselves in your articles accordingly; at all events, we assure you of the business co-operation of some seven or eight thousand retailers now mostly antagonistic. We do not ask proprietors to confine the sales of their

articles to any one section of retailers, provided such retailers conform to the law and to the honorable methods advocated by our Association.

With regard to the public, we find that after a little explanation they settle down to the new prices quite naturally, as they do with regard to any other rise in the markets.

There is one other consideration that may well weigh with you. Proprietors who protect find that retailers are much more willing than formerly to distribute advertising matter for them. The proprietor of Scott's pills (lately added to protected list) recently stated that his printers were quite full up with his orders.

On the other hand, resolutions have been passed at various meetings binding those present not to distribute any literature or exhibit any showcards relating to proprietaries on which there was not a reasonable profit guaranteed. We offer our goodwill and support for much less than the 50 per cent. which our few opponents allege we are seeking.

It is impossible, in a communication like this, to give you all the information we would like. Our Secretary, Mr. Glyn-Jones, will, however, be pleased to give you what further particulars you may desire, either by letter or interview. We believe he purposes forwarding you descriptive pamphlet. Meantime, we ask for your earnest attention to this memorandum. It is our firm belief that joining the P.A.T.A. (especially if at an early period in its history), and ensuring an adequate profit on your article, would result in lasting good to your firm.

We are, yours very faithfully,

W. R. Barnes, chemist, Upton Manor, London, E.
 James Cocks, 8 Edgecombe Street, Stonehouse, Devon, Secretary of Plymouth, Devonport, and Stonehouse Chemists' Association.
 Albert Cooper, 80 Gloucester Road, South Kensington, London, S.W.
 T. P. Garrett, 33 Commercial Street, Newport.
 W. Johnston, 9 Loughborough Road, Brixton, London, S.W., Secretary of South London Chemists' Committee.
 W. Jones (Morris, Banks & Co.), 2 High Street, Birmingham, Chairman of Birmingham Chemists' Trade Committee.
 S. Lister, chemist, Great Horton.
 S. N. Pickard, 74 Manningham Lane, Bradford, Secretary of Bradford Chemists' Association.
 H. W. Seely, 14 Southgate, Halifax, Secretary of Halifax Chemists' Association.
 J. Williams, 47 Wilmslow Road, Didsbury, Chairman of Manchester, Salford, and District Grocers' Association; Chairman of Northern Council of Grocers' Association.

The above are the elected representatives of the retail members of the P.A.T.A.

Trade-Marks Applied for.

(From the "Trade Marks Journal," November 11, 1896.)

Sketch of farmer sowing seeds; for liver seeds, being a medicine for human use. By Gasser Evanovitch, trading as Sands' Medicine Company, 25 Hart Street, Bloomsbury Square, London, W.C. 193,303.

"IZONA"; for botanical or herb beer. By Mr. R. McCulloch, 134 Manchester Road, Bradford, Yorks, herbalist. 193,174.

Facsimile signature of applicant for mineral and aerated waters. By Mackie & Gladstone, 88 Hamilton Street, Birkenhead. 193,711.

"PHARONA"; for a dentifrice. By T. Syme, 3 Clarence Street, Manchester, solicitor. 193,550.

Device of silk hat with lettering underneath to form face; for medicines contained in capsules, suppositories, and pessaries. By the British Medicinal Capsule Company (Limited), 37 Theobald's Road, London, W.C. 197,610. The essential particular is the device.

(From the "Trade Marks Journal," November 18, 1896.)

FERRAH SOAP; for olive-oil soap. By Haron Varbetian & Co., 64 Faulkner Street, Manchester, merchants. 193,300. The essential particular is the word "Ferrah."

Device of Tay Bridge with wording on label; for table-salt. By the Mill Bay Soap Alkali and Soda Company (Limited), Mill Bay, Plymouth. 193,083. The essential particular is the bridge device.

Trade Reports.

42 CANNON STREET, E.C., November 26.

THERE are very few alterations to report this week in the position of chemicals and drugs. Trade has been rather quiet, and almost all auctions this week have been somewhat disappointing in character. At to-day's sales, which were fairly heavy, 1,436 lots were offered, of which only 561 found buyers during sales. This proportion is rather smaller than we have been accustomed to lately. In the chemical-market the chief features of importance are the great firmness of carbolic acid. Citric and tartaric, as well as cream of tartar, are easier, the last-named article being now obtainable in white crystals at 79s. per cwt. In heavy alkalies there are scarcely any alterations. Quinine dull of sale at somewhat easier rates, and there has been an advance in the price of santonin. Sulphate of copper is dearer. The principal alterations in the drug-market may be summed up as follows:—Cape aloes standing easier; Curaçao firmly held; Socotrine is reported dearer, owing to speculative buying. Balsam Tolu is somewhat easier; Copaiba firmly held; Peru quiet. Belladonna-root remains very scarce, and prices are again somewhat firmer. Buchu-leaves are dearer. Fine Smatria benzoin is firmly held; common grades are neglected. Cascarella is again somewhat dearer. For crude camphor slightly higher prices are also said to have been obtained. Cardamom-seed sold at an advance at to-day's auctions, but fruit showed an irregular decline, medium qualities being about 6d. per lb. below last auction rates. Calumba very scarce and dear. Croton-seed also keeps very high in price. Colocynth from 3d. to 4d. lower. Fine dragon's blood scarce. Elemi is reported to be somewhat higher privately. Ergot of rye unchanged. Gum acacia dull of sale; for fine ammoniacum a high price was paid. Gentian is again dearer. Gum mastic tending lower. Gamboge fully 5s. easier. Honey steady. Jalap a trifle lower. Brazilian ipecacuanha somewhat easier. In musk there has been a speculative movement, and higher rates are asked. Myrrh lower. Essential oils generally dull. Japanese peppermint dearer; HGH firm. Star-anise lower. Lemongrass oil firm. Citronella again reported dearer. Cod-liver oil dull and tending easier. Castor oil well maintained. Saffron of new crop sold at extreme rates. Sarsaparilla of good quality is in demand. Senna sold at unaltered rates, but good grades are firm. Musk-seed is reported dearer. Beeswax, unaltered. Japan wax very firmly held. Drysalteries are quiet. Turmeric a trifle easier. Shellac sold lower at auction, but has since improved a little. Galls firmer, especially for blue and white Smyrna. The spice-market is very dull, with the exception of Jamaica ginger, which remains scarce and dear. Linseed oil a trifle easier. Crude rape oil about 6d. dearer, refined very firm. Cotton-seed oil 3d. lower. Coconut oil easier for Ceylon, steady for Cochin. Palm and olive oils unchanged. Turpentine easier; American 20s 6d. Petroleum flat at unchanged prices. Bar silver has slightly advanced, and now stands at 30d. per oz. The Bank rate remains 4 per cent.

The representatives of the Iodine Syndicate continue to assert that there is no likelihood whatever of any alteration in the price this side of the end of March, 1897, when the combination comes to end; and they express confidence that it will then be renewed. There are, however, some circumstances in the position of the iodide market little calculated to bear out this optimistic

view. It is reported, for instance, that some serious disagreements have broken out between the iodine combination and the iodide manufacturers. The cause of the trouble seems to lie in Japan, where the industry of the manufacture of iodine from kelp has been rapidly developing lately. As Japan was also one of the principal markets for iodides, the European manufacturers of those articles, in order not to lose their Japanese trade, and at the same time to put a check on the development of the Japanese industry, sold iodides to Japan at lower rates than they were charging their European customers. The Japanese have retaliated by shipping back quantities of these iodides, and also some parcels of their own manufacture, to Europe and America, and these lots have been sold at lower rates than those of the convention. We understand that the European iodide-manufacturers on their part have approached the iodine ring with a demand for a reduction, to them only, in the price of the material. A meeting, at which several German and English iodide-manufacturers were present, was held in London on Wednesday to discuss the matter. Although those present at the meeting bound themselves to secrecy, and the precise result has not transpired, it is said that for the present the causes of disagreement have been removed, but the trouble may break out again at any time, and the existence of Japanese competition certainly does not tend to improve the chances of the continuation of the present iodine-prices.

The distillation of essential oils has recently been taken up in Holland by a firm who claim to be in an especially favourable position for the manufacture of certain oils of this kind, because Holland is an important centre of the spice-trade, and because many essential-oil seeds, such as caraway and mustard, are grown extensively in that country.

Our Hamburg correspondent telegraphs on Thursday evening that business in his city is greatly disorganised in consequence of the dock-strike, which is spreading in all directions, the lightermen being also on strike. There are few changes in the drug-market. Refined Camphor is lower at 3.10m. per kilo. Menthol very firm at 17m. per kilo, lowest quotations. High prices asked for American peppermint oil, H. G. H., 7.50m.

Our New York correspondent cables on Thursday afternoon that the drug and chemical markets generally present a very quiet appearance. There has been an advance of 10c. per gallon in Newfoundland cod-liver oil. Tolu balsam weak, and offering at the reduced rate of 30c. per lb.; all kinds of Copaiba balsam firm. Cascara sagrada offers at 4½c. per lb. for good quality. Tanea beans firmly held for all varieties. Essential oil generally unchanged. American oil of peppermint firm. Castor oil scarce, and firmly held at last week's advances.

Our Smyrna correspondent telegraphs on Wednesday evening that the market has been very active this week, American agents having bought 150 cases of fair Manufacturing at the equivalent of 8s. 8d., advancing to 8s. 9d. per lb., f.o.b. The position closes extremely firm.

ACIDS.—There is no change in Citric acid, which is still offering at 1s. 1½d. from the makers, and at 1s. 1½d. per lb. in second hand for B.P. quality. Tartaric acid dull of sale at the recent reduction. The English manufacturers' price for B.P. is nominally 1s. 1d. per lb., while foreign still offers at 12½d. per lb., on the spot. There are no buyers for either kind, however. At auction to-day 17 bags fair pinky cakey Argol realised 43s. per cwt. Carbolic remains extremely firm. Ore manufacturer requires 2½d. per lb. for 39-40° C.

crystals, but in second-hand it is still possible to buy at 8d., or perhaps 7½d. per lb.; 34-35° are comparatively cheap, and in little demand—6½d. per lb. would still be accepted. For crude 75 per cent. 2s. 6d. per gallon is asked, while for 60 per cent. 2s. 2d. has been paid and 2s. 3d. is now required.

ALOES.—Cape aloes neglected. Holders are quite disposed to give way sufficiently to meet buyers' views. Of 64 cases offered, only 17 sold, at from 18s to 20s. for ordinary drossy to dull hard. Good quality was all bought in up to 22s 6d. per cwt. Of *Curacao* aloes only 31 packages were shown; 21 of these sold, with fair competition, at 33s to 34s. per cwt. for good bright brown livery, and 27s per cwt. for darkish livery. The demand is good, and the market steady. Twenty-nine packages *Socotrine* aloes were catalogued, but 10 were said to have been sold privately before the auctions, the remainder, being all very dark and common hard quality, sold without reserve at from 29s. down to 15s per cwt. It was announced that the entire supply of *Socotrine* aloes in first hand has been disposed of privately.

ANNATTO.—Ten cases annatto paste from New York of fair appearance sold without reserve at 4½d. to 5½d. per lb.; 35 bags of West Indian and East Indian seeds, good quality, were bought in at 4d. per lb.

ARSENIC still remains very firm, in spite of the supplies from a new source which are now regularly coming to market. Best white English powder is quoted at 23s. to 23s. 6d. per cwt., landed terms.

BALSAMS—*Tolu* balsam appears to be tending easier. None was offered at to-day's auctions. *Peru* balsam quiet; 3 cases of direct import shown to-day are held for 7s. 6d. per lb. *Copaiba* balsam of good quality remains firm. At auction 7 casks of good bright thick yellow *Maranhão* were shown, and for these 1s 11½d. to 2s per lb. is asked. Four kegs thin yellowish *Para* realised 1s. 11½d. per lb.

BENZOIN.—Good quality of *Sumatra* gum is scarce and inquired for, common kinds neglected. At auction 331 packages of this variety were shown, but only 15 found buyers, at 7l. 15s. per cwt. (subject) for good seconds, pale almondy centres, slightly false-packed; and 7l. 7s. 6d. to 7l. 10s. for slightly more false-packed; fine quality is held at from 8l. to 8l. 5s. per cwt. Of *Siam* gum 21 packages were shown, and all bought in. The price for small to medium loose almonds and grain is 16l. per cwt., while for common blocky grey siftings 47s. 6d. per cwt. is required. Of 91 packages *Palembang* gum 29 sold, subject to approval, at 25s. per cwt. for fair quality.

BUCHU.—Rather firmer. Of 52 packages, 22 found buyers at 3d. to 3½d. per lb. for good round green and 2½d. to 2¾d. for dull and yellow mixed leaves.

CALUMBA.—Very scarce, and held for high prices. Good clean yellow washed was bought in at 60s. per cwt.; 5 bags medium partly yellow washed pickings realised 37s., and privately 30s. is required for fair seconds.

CAMPHOR (CRUDE).—At the end of the week a sale of 100 piculs *Formosa*, October-December shipment, was reported at 110s. per cwt. c.i.f., and this week the market tone improved to the extent of about 2s. 6d. on *Formosa* camphor, of which 400 piculs near at hand were sold at 12s. 6d. c.i.f. A sale of 300 piculs *Japan* camphor, December-February steamer, is also reported at 125s. per cwt. c.i.f. At auction 65 cases *Formosa* camphor, salvage ex *Verite*, sold "with all faults" for account of the underwriters and without reserve. Slightly water-damaged gum realised 107s. 6d. Very badly damaged 100s. per cwt. These are good prices.

CARDAMOMS.—The arrivals this week have been 11 cases of cardamoms and 8 cases of seed by the *Benvenue* from Ceylon, and to-day a rather larger consignment of 80 packages has been received from Colombo by the *Tosa Maru*. These arrivals were not without influence upon the position at to-day's auctions, which was, moreover, further affected by the quantity offered being somewhat larger than has recently been the case. Sixty-eight packages were offered, and of these 33 sold at slightly easier rates for medium grades, an average decline of 6d. per lb. on good qualities, whereas cardamom *Seeds* realised about 6d. above the last auction rates. The following figures were paid:—*Ceylon-Mysore* medium, nice slightly yellowish fruit, 4s. 6d.

to 4s. 7d.; small to medium ditto, also 4s. 6d. to 4s. 7d.; for fine bold a bid of 5s. 4d. was refused. Small to medium round, nice pale, realised from 3s. 9d. to 4s. 1d.; mixed sizes, partly split and brown, 3s. 4d. to 3s. 5d.; very small pale, 3s. 2d. to 3s. 4d. per lb. *Ceylon-Malabar*, for medium to bold greyish, rather lean, 4s. 7d. was refused; small to medium fair brownish realised 3s. 10d.; duller ditto, 3s. 6d. *Seeds* brought from 4s. 3d. to 4s. 6d. per lb.

CASCARILLA, although in fairly plentiful supply, remains strongly inquired for, and at to-day's auctions 46 out of 60 packages sold at a further slight advance. Medium silvery mixed small broken quill realised 39s. to 40s., small broken and thin from 28s. to 34s.; siftings from 20s. down to 13s. per cwt.

CHAMOMILES have been in better demand lately, especially on the Continent. As much as 62s. 6d. per cwt. is said to have been paid for fine *Belgian* flowers.

CHIRETTA—Quite neglected. For 10 bales very stalty herb only 2d. per lb. could be obtained. They were sold subject to approval.

CINCHONA.—At auction 12 packages small broken orange *Maracabo* sold without reserve at 4½d. to 6d. per lb.; 21 bales thin dark damaged flat cultivated *Calisaya* from Hamburg realised 2½d. to 3d. per lb.; 4 bales from *Savanilla* (Colombia), described as a trial shipment, and catalogued "as cultivated plantation-bark," sold at 3d. per lb. for bright medium thick orange pieces, and from 2½d. to 3d. for split and broken quill; common damaged realised 1½d. per lb. The bark is of the *Succirubra* character, and the total shipment only amounted to 391 lbs. This is the first time that bark of this character has been received from that part of South America.

COCA-LEAVES.—To-day's auctions included one large quantity of 120 bales of coca-leaves, almost equally divided between *Truxillo* and *Huanoco* variety. The parcels shown were generally of good quality. Privately, we understand that 9½d. per lb. has been paid for good *Truxillo* leaves. The whole of to-day's lots was bought in at nominal prices, 1s. per lb. being the limit for good quality.

COCOA POWDER.—At public auction on Friday last the following sales (duty paid) were made:—149 packages *Dutch* (double diamond), in ¼-cwt. and ½-cwt. cases and 1-cwt. and 2-cwt. casks, all at 9½d. per lb. Three cases *Spanish* (N. C.), containing 225 ½-lb. tins each, at 5½d. to 6d. per lb.

COLOCYNTH.—The supplies of *Turkish* apple are on the increase, and small sales are reported privately at a reduction of 1d. per lb.—viz., 2s. 3d. for good pale quality. At to-day's auction a further decline of from 3d. to 4d. per lb. was established in *Turkish* colocynth, of which a broker sold 5 packages good pale to rather small and seedy at 1s. 11d. per lb. Another one bought in 9 cases of good quality at 2s. 6d. per lb. Ten cases seedy *Spanish* apple bought in at 1s. 2d. per lb., and of 34 packages of colocynth pulp, pulped in Spain, 5 sold at extremely high prices—namely, from 5s. 6d. for fair to 8s. per lb. for very fine white, common, realising from 2s. 1d. to 1s. per lb. The drug was put up in small pickets, handy for wholesale druggists' requirements. Seeds could find no buyer.

CROTON SEEDS.—Seven bags good quality, from *Colombo* sold (subject) at 82s. 6d. per cwt.

CUBEES.—Without demand; 53 bags of fair quality, partly mixed with some stalk, from *Singapore*, were shown. A bid of 25s. per cwt. was rejected, the owner requiring 30s.

DRAGON'S BLOOD.—There is no fine fiery lump in first hand, although some few cases might still be found in the second. No gum of this variety was offered at auction to-day. Nine cases shown at auction did not include anything of fine quality; they were all sold at full prices, fair soft seedy cakey at 5l. 15s. per cwt., dull hard saucers at 80s. to 82s. 6d. per cwt.

ELEMI.—Privately rather higher prices are asked, 25s. per cwt. being mentioned as the quotation for good white *Manilla*. At auction 28 cases of this description, from *Singapore*, were bought in at 27s. per cwt.

ERGOT OF RYE shows no change. One bag of small grey ergot from the *Canary Islands* was bought in at 6d., and 3

bags wormy *Spanish* of recent import at 8d. per lb., a bid of 6d. being rejected for the last-named parcel.

GALLS—There has been a good demand for green and white *Persian* galls at higher rates. There are now no green galls left in first hand. The quotation is from 38s. for common to 44s. for good, while for good to fine white from 40s. to 42s. 6d. per cwt. has been paid. There are inquiries for blue galls at from 48s. to 50s. per cwt. for fine quality. *Smyrna* galls is small supply and more or less nominal in price; green and white varieties are inquired for. At auction 10 cases *Corea* galls realised from 43s. to 47s. For arrival 200 cases of new crop *Chinese* galls, usual shape, are reported to have been sold at 60s., c.i.f.; on the spot 65s. per cwt. is asked. Reports from China state that in the northern districts very high prices continue to rule. There is at present scarcely any supply of *Canton* galls, but the new season's crop was expected to arrive at the shipping-ports in November.

GAMBOGE—In fairly large supply, 53 cases being offered of which 20 sold at an average decline of from 5s. to 10s. per cwt. The following prices were paid:—Rather dark small to bold, partly blocky pipe and fracture, 7l 15s to 8l 2s 6d; small broken pipe of poor colour, 7l 2s 6d.; good but common pickings, 7l 7s 6d. down to 6l 2s 6d.; chips, 6l 15s. per cwt. For good blocky pipe of orange fracture 9l. per cwt. is asked.

GENTIAN-ROOT—This drug, as well as powdered gentian, has been arriving somewhat more freely from France recently. Notwithstanding these arrivals, the market shows an advance on the week from 1s. to 2s. For a quantity of good French root 27s 6d. per cwt. has been paid privately, and from 28s. to 29s. is now required. For shipment there does not seem to be anything below 24s. 6d. per cwt., f.o.b.

GLYCERINE—It is reported that crude glycerine is again firmer on the Continent, but in refined there is no alteration. Last week's quotations for double-distilled, s.g. 1260, still hold good.

GUM ACACIA—*Soudan* sorts and picked *Trieste* gums are quite neglected. So called insoluble *Persian* gum remains in fair demand; picked pale has been sold at 20s., fair to good sorts at 13s. to 15s. per cwt. A lot of exceptionally fine picked has realised 24s. per cwt. Privately there has been a fair demand for *East Indian* gums, at from 50s. to 55s. per cwt. for fair to good *Amrad*, 32s 6d. for *Cannopore*, 29s for *Oomra*, and 30s. per cwt. for fair *Ghatti*. Several parcels of *Trieste* picked gum and *Soudan* sorts were bought in. It is said that fine pale sorts are selling privately at 85s. per cwt.

GUM AMMONIACUM—At auction to-day 6 packages were offered, of which 2 sold at a very high price; 65s. per cwt. for fine selected yellow drop.

GUM GUAIACUM—Two cases good bright block; one sold at 1s. 6d. per lb.

IPECACUANHA—There has been an arrival of 10 packages *Brazilian* from Monte Video. At auction to-day 56 packages of this variety were offered. The average quality was not very good, and only 11 packages sold with some difficulty at a decline of about 2d. per lb. For picked root 6s 6d. is asked. Fair sound partly stout sold at 5s 9d. per lb.; damaged, partly thin, at from 5s. 8d. to 4s 11d., and badly damaged poor quality from 4s. 9d. to 3s. 11d. per lb. *Colombian* root; 14 packages were offered, 8 sold at rather low prices, 3s 8d. to 3s. 10d. per lb., but the qualities were very poor, and the root badly damaged. Privately good root, third-class damaged, has been sold at the steady rate of 4s. 1d. per lb.

JALAP—About $\frac{1}{4}$ d. per lb. easier. Of 41 packages offered to-day 11 sold at $5\frac{1}{2}$ d. to 6d. per lb., subject, for very damaged *Vera Cruz*. Sound was bought in at 7d. to $7\frac{1}{4}$ d. per lb., bids of 6d. being refused. One holder would sell at $6\frac{1}{4}$ d.

KOLA-NUTS—At the spice-auctions this week 8 packages of *Grenada* (West Indian) sold at 5d. to 7d. for medium good bright dry. At to-day's auctions there was a large supply of 64 bags *East and West Indian*; only 5 sold at 4d. for dull, and 6d. (subject) for good washed. Of large kidney-shaped *Hayti* kolas, 6 packages were offered; a bid of 10d. per lb. is to be submitted for these.

MENTHOL—One-case lots of good quality are quoted at 8s. per lb.; larger quantities might still be had, in all probability, at 7s. 6d. per lb. For shipment the quotation is from 7s. to 7s. 3d. per lb., c.i.f.

MUSK—It has been reported that privately a considerable business has been transacted at rising prices, quotations being made from 4s. to 5s. in excess of those given at the close of last week. It seems, however, that the movement, if it does exist at all, is almost entirely speculative, and confined to one or two well-known firms. At the auctions there was no visible sign of the improvement, although higher prices were asked. Of first-pile *Tonquin* pods, 14 tins were offered and bought in, 85s. per oz. being required for partly broken blue and brown skins, well trimmed, slightly damp. A bid of 65s. per oz. was to be submitted for small to bold old-fashioned slightly damp pods, skin and underskin. We hear that this has since been refused. Of third-pile pods 9 packages were offered and bought in at 50s. per oz. for rather damp blue and brown skin mixed, well trimmed pods, and at 40s. for old-fashioned, small to bold very damp, well trimmed.

MYRRH—In very large supply and difficult to sell excepting at lower prices. Of 107 packages shown to-day 34 found buyers partly at a decline of from 5s. to 10s. per cwt. Native picked sorts of dark coloured, at 64s.; ordinary sorts, 34s. to 41s.; coarse ground, at 35s. 6d.; pickings from 20s. down to 7s. per cwt. Fine picked myrrh was bought in at 5l. 10s. per cwt.

OIL (CASTOR)—There has been no further change in the quotations of *Mitchell's English-drawn* oil, which is still offered at $4\frac{1}{2}$ d. per lb. for pure cold-drawn, and at $3\frac{1}{2}$ d. per lb. for first pressings. For *East Indian* oil the quotations are now firm at 4d. for firsts, and $3\frac{1}{2}$ d. for second-quality *Calcutta*. At auction 30 cases seconds were bought in at $3\frac{1}{2}$ d. per lb.; and 10 cases *Italian* (cases stained) at $4\frac{1}{2}$ d. per lb. *French* castor oil keeps very firm. First pressing, January delivery, has been sold at 30s. per cwt., c.i.f.; second pressing at 29s. per cwt., c.i.f. Medicinal oil in cases is still offering on the spot at 37s. 6d. per cwt.

OIL (COD-LIVER)—Tending lower. For *Jervell's* brand 165s. per barrel, c.i.f., would now be accepted. At auction 74 casks of good quality *Norwegian* were bought in at 160s. to 170s., and 26 casks MD brand, Aalesund, were also bought in. For the last-named there was no bid at 135s. per cwt.

OILS (ESSENTIAL)—*Oil of caraway* is now offering at from 4s. 6d. to 5s. per lb. for English drawn. *Dutch* caraway oil offers at 4s. per lb., c.i.f. terms. It is said that the caraway crop in Holland has yielded only a good average result—not the heavy crop that was expected. Nevertheless prices have given way rapidly to a point fully one-fourth below last year's minimum figure. Lately, however, there has been some recovery in the market. *Dutch nutmeg* oil is quoted at 3s. 6d. per lb., c.i.f., and distilled *Oil of mustard* from Dutch seed, at 16s. per lb., c.i.f. *English drawn Oil of cloves* remains very cheap at from 2s. to 2s. 2d. per lb. *Oil of rose* is firmly held, and it is said that the tendency is towards higher rates. At auction to-day a considerable variety of essential oils was offered, but very few sales were made. Several lots of *Cinnamon* oil and *Cinnamon leaf* oil elicited no bids. Two cases Fisher's Singapore "*Lemon*" oil sold, apparently at 4d. per lb., conditional upon that price being sufficient to defray charges. *Eucalyptus* oil in good supply. Three cases of a yellow oil sold at 1s. 3d. per lb., and 3 cases Tasmanian *Globulus* oil at 1s 9d. per lb. For *Platypus* oil the limit is 2s. per lb. *Risdonia* oil was bought in at 2s. per lb. For 15 cases fair yellow *Camphor* oil, direct import from Japan, 5d. per lb. was refused, and for oil of *Bay* a bid of 7s. 6d. per lb. was rejected. *E.I. Rose* oil is held for $3\frac{1}{2}$ d. per lb. Six cases dementholised Japanese *peppermint* oil sold at 3s. 9d. per lb.; one case 40-per-cent. oil at 5s. 6d. per lb. These prices show a considerable advance. Privately, dementholised oil offers at 3s. $7\frac{1}{2}$ d. per lb. on the spot, and it is said that there has been a good deal of business for arrival at 2s. $4\frac{1}{2}$ d. per lb., c.i.f. *Cassia* oil neglected. The quotations for shipment are too high to lead to business. *Lemongrass* oil firm at $2\frac{1}{2}$ d. per lb. on the spot. *Star-anise* oil easier. On the spot 8s. per lb. is the nearest quotation, and for arrival business has been done at 6s. 6d. per lb., c.i.f.

December shipment. *Citronella oil* is held at 1s. 3d. per lb. on the spot. A sale of 5 tons January-February shipment has been reported at 12½d. per lb., c.i.f., but no confirmation of that transaction can be obtained. At any rate, the current quotation is 1s. 1½d. per lb., c.i.f., and it is said that there are buyers at that price.

OPIUM.—Business has been very quiet, and the only transactions worth mentioning have been in *Soft shipping*, which has realised steady rates good being quoted at 11s. 6d. and fine from 13s. to 13s. 6d. per lb. *Druggists' opium* is rather neglected, at from 8s. 9d. to 9s. 3d. for fine and 8s. to 8s. 6d. for second quality. Really fine *Persian opium* is scarce, and there is a fair demand for usual manufacturing qualities, the quotations being ordinary from 7s. to 9s.; medium to good, 9s. to 9s. 6d.; and fine from 10s. to 10s. 6d. per lb.

ORRIS.—No demand was shown at to-day's auctions, when 35 packages of *Italian orris* were offered; fair pale *Florentine* was bought in at 70s. to 72s., coarse-ground at 70s. to 72s. 6d., and fine powder at 85s. per cwt. A lot of dark-brown *Aden orris* was also bought in at 25s. per cwt.

PATCHOULI-LEAVES.—There were 65 bales of this article which is low in price and difficult to sell at present. Only 5 packages sold at 4d. per lb., for brown damp leaves from Penang. A parcel of dusty and stinky leaves imported via New York was bought in at 6d. per lb.

PODOPHYLLIN.—B.P. quality still offers at 12s. per lb., but is becoming rather scarce. The firm who issued a circular upon which we commented recently informed us that during the last few weeks they have sold more podophyllin than in the preceding two years.

QUICKSILVER.—Steady, but unchanged, at 6l. 12s. 6d. from the importers and 6l. 11s. per bottle from secondhand.

QUININE.—The small transaction of second-hand *German bulk quinine* (H B) at 9d. per oz., to which we referred last week, has remained apocryphal. Small sales, however, have taken place at 9½d. per oz. The market is dull, and tending somewhat easier.

RHUBARB was represented to-day by 116 packages. For most of these firm prices asked, but the demand was not very great, and only 20 cases sold at very steady rates. *Canton medium flat*, fair colour and fracture, 1s. 1d. per lb.; high-dried flat, nice coat and fracture, 10½d.; dark flat and round rough coat, partly wormy, 7½d. to 8d. per lb. It is reported that since the sales business has been done in fine round *Shensi root* at 2s. 9d. per lb., and in fair trimming root at 1s. 2d. per lb.

SAFFRON.—A case of superior quality new crop *Valencia saffron*, just arrived, changed hands at 50s. per lb., but the sellers are now able to supply similar quality at 47s. 6d. per lb. net, landed terms. That figure may be taken as a fair quotation, but in some quarters as much as 52s. is asked for superior new *Valencia*. Quotations for old crop run from 45s. to 47s. per lb.

SANTONIN.—The prices of this article (which is now practically in the hands of two large manufacturers) have been raised this week, and all the discounts are abolished, while it is further provided that orders must be taken in one delivery. The present quotations are as follows:—

	2 cwt.	1 cwt.	56 lbs.	28 lbs.	Smaller wholesale quantities.
Per lb. ..	5s. 2d.	5s. 7½d.	5s. 9d.	5s. 10½d.	6s.

SARSAPARILLA.—A new parcel of 16 packages genuine grey *Jamaica cut* was offered to-day. The whole of this parcel, more or less damaged, realised a good price—namely, 1s. 7d. per lb. *Honduras sarsaparilla*: 17 serons were shown; one of of common quality 11s. per lb., while other lots were bought in at 1s. 2d. to 1s. 4d. per lb. Of *Lima-Jamaica*, 43 packages were shown; the whole of this was sold at fairly steady prices—namely, 1s. upwards for more or less damaged quality.

SEEDS (VARIOUS).—*Musk-seed* is much dearer. A quantity of good *West Indian* has just been sold privately at 1s. per lb., and even higher prices are asked now. Several parcels of Spanish and Italian *Anise* were bought in at nominal prices. For 15 bales Japanese from Yokobama, of fair aroma, 37s. 6d.

per cwt. was asked, but only 12s. was offered. Twenty-three bags East Indian *Dill seed* sold at 10s. 6d. per cwt. For German *Fennel seed* 17s. is asked, and for East Indian 15s. per cwt. Several lots *Strophanthus* were bought in. For 18 cases Chinese *Star anise*, slightly moldy, 95s. per cwt. is asked, whole for 17s. For spurious Japanese a bid of 11s. per cwt. was rejected.

SHELLAC opened very quietly in anticipation of the very heavy auctions which took place on Tuesday, and at which 1,234 cases were offered, including over 500 cases of *Orange lac*, catalogued without reserve. Altogether, 726 cases sold, at an irregular decline of from 5s. for blocky to 2s. for good free second *Orange Garnet lac* was also considerably lower. The following prices were paid:—*Orange*: Good to fine pale, 86s. to 90s.; fair, partly cakey and reddish, 83s. to 84s.; hard red blocky to pale cakey, 78s. to 82s.; common livery block to dull red blocky, 73s. to 78s. per cwt.; blocky *OC Garnet lac*, 70s. to 71s. per cwt. The quotation for fair TN *Orange* privately is now 84s. to 85s., and for AC *Garnet* 87s. per cwt. After the auctions the tone again improved, and a fair quantity that had been sold in public sale changed hands again at an improvement of about 3s. on ordinary qualities.

SPICES are dull all round excepting for *Jamaica ginger*, which is practically unobtainable in fine quality, while at auction 13 barrels good small common realised from 80s. to 80s. 6d. per cwt. *Cochin ginger* 1s. lower for rough, which sold at from 12s. to 15s. 6d. per cwt. for low trimmings and pickings, and from 28s. 6d. to 29s. 6d. for wormy to dull medium and small washed. Cut *Cochin steady*; ordinary native 31s. 6d. to 32s. 6d.; fair small to medium, to fine bold ditto, 40s. to 85s. per cwt. *Nutmegs* dull and rather easier, the supply being heavy, especially of *West Indian*. *Mace steady*. *Zanzibar cloves* weak and inactive; ordinary dark *Zanzibar* sold at auction at 2d., good picked *Penang* at 9d. per lb. Privately sales of *Zanzibar*, March-May delivery, have been made at 2½d. per lb. Of *Chillies* 20 bales *Zanzibar* sold at a decline, without reserve; medium dull, 30s.; good fair red *Sierra Leone* sold at 35s. per cwt. *Capsicums* realised 16s. to 16s. 6d. per cwt. for fair to mouley *Japan*. *Pepper flat* for black varieties; good washed *Singapore*, 2½d. per lb.; white, lower, at 4d. for fair *Singapore*, and easier at 3½d. for fair *Penang*.

TURMERIC.—Quiet, but steady, for most kinds, but rather easier for *Bengal*. Sales of fair to fine *Cochin* ginger have been made at 8s. to 10s., and ordinary to fair *Bengal* at 8s. 3d. to 8s. 6d. per cwt. At auction 60 bags fine *Bengal*, of dark fracture, realised 9s. per cwt.

VALERIAN-ROOT.—Neglected. The new crop is now available at 28s. to 28s. 6d. per cwt. on the spot, while for old root 26s. per cwt. would be accepted. There are no buyers of either kind at these prices.

VANILLA.—No fewer than 680 tins of vanilla having been declared for sale, the auctions of this article will be held separately to-morrow, Friday, commencing at 11 A.M. Since the first arrivals of the new season's vanilla, about the middle of September, about 20,000 lbs. have arrived on the Continent from Reunion, and further shipments are expected. The *Seychelles* crop is now at an end. It is said to have yielded about 45,000 lbs., while from *Mauritius*, *Madagascar*, and smaller centres of production, the aggregate of about 22,000 lbs. has been received. It is said that at present only 4,500 lbs. remain in the island of *Mauritius*, and that this has been sold for shipment. The total arrivals therefrom amount to only about 90,000 lbs., and as everything has been rapidly bought up, there remains very little stock at this moment either in London or any of the Continental centres. The prospects for the new crop are said to be poor, and it is expected that the *Seychelles* will not yield more than from 17,500 lbs. to 22,500 lbs., or half an average crop. With regard to *Reunion*, it is still too early to make a forecast, as the vines flower later there than in the *Seychelles*. The total of the last crop in *Reunion* is estimated at from 142,000 lbs. to 165,000 lbs. It would therefore seem that about 125,000 lbs. was still available in the island, but a large quantity of this has been sold on the vines, and will not appear in the market. This quantity will form the backbone of our supplies until the autumn of 1897, and it seems therefore as if the high prices will be main-

tained, especially as the consumption is constantly on the increase, while the low price of cocoa and sugar enable the chocolate-makers to pay high rates for vanilla. From America orders are expected, as very little has been bought by the United States from consumers in Europe during the last two years, and it is thought that the Mexican crop, which is generally taken up in the States, will not be sufficient to fill the requirements of that country.

VARIOUS DRUGS.—For fair quality Cus-cus root 30s. per cwt. is asked. *Civet* neglected; good quality was not shown. For 4 horns pale doubtful, 18s. per lb. is the quotation. Twenty bags *Calabar beans* bought 2d. per lb. For fair quality *Cascara sagrada* (68 bales) 16s. per cwt. is the limit. An offer of 3s. per lb. for a parcel of biennial extract of *Henbane*, B.P. "Rhinceros brand" was refused, the limit being 4s. 6d. per lb. Good *Guarana* is limited at 1s. 10d. to 1s. 11d. per lb. *Honey* in very small supply; *Jamaica* was not offered. For two packages fair bright *Montserrat*, 24s. was paid, and 20 cases good *California* were bought in at 40s. per cwt. Of 11 packages *Tonca beans*, one sold cheaply at 1s. 6d. per lb. for fair black, slightly frosted *Para*; for foxy quality 8½d. is asked, a bid of 7d. being refused. *Kamala* neglected. Six cases were bought in at 3½d. One case of *East African kino* was bought in at a low price. There was no bid at 5s. per lb. For 18 puncheons fair clean *Jamaica lime juice* a bid of 9d. was refused, 10d. being the quotation. *Vermilion*: At auction to-day 17 cases of *Winghit* brand Chinese vermilion were bought in at 2s. 4d. per lb.

WAX (BEES).—A large variety of beeswax was offered for sale to-day, but most parcels remained unsold. Of *Australian wax*, 7 packages changed hands at from 5l. 15s. (subject) to 6l. 5s. per cwt. For 3 cases of Japanese beeswax of rather nice appearance 6l. per cwt. was paid. Fine pale yellow *West Indian* realised 8l. 7s. 6d.; fair *Jamaica* 8l. Three packages dark *San Domingo* realised 5l. 12s. 6d. per cwt., and 10 cases rather common yellowish bleached *Calcutta* sold cheaply at 6l. to 6l. 2s. 6d. per cwt. For 43 packages *Zanzibar wax* prices ranging from 5l. 17s. 6d. to 6l. 2s. 6d. were accepted.

WAX (JAPAN).—A few days ago sales were made on the spot at from 51s. 6d. down to 50s. per cwt. for fair quality. Sales are also reported at 45s. 6d. c.i.f., near at hand. At auction to-day a bid of 43s. per cwt. was refused for 10 cases of fair quality, for which 50s. is asked. Arrivals, however, are taking place somewhat more freely.

The Market in Heavy Chemicals.

Although there are not many alterations to report this week in the heavy-chemical market, it may be stated that there is a fair inquiry and moderate business passing in the miscellaneous products. Papermakers, dyers, and calico-printers are busy, whilst the demand for chemicals from glassmakers is heavier. Prices, on the whole, are fairly firm. *Bleaching-powder* is in better request, and *Caustic soda* is moving more freely. *Benzols* are dull, the only alteration to note in prices given last week being for 50 per cent. prompt, which has declined from 3s. 1½d. to 3s. *Sulphate of copper* is higher—Anchor, 17l. 15s.; Liverpool, 17l. 15s.; January-April, 18l. *Sulphate of ammonia* is dull, and present quotations stand—Leith, 7l. 11s. 3d.; Beikron terms, 7l. 15s.; Hull, 7l. 15s.; London, 7l. 17s. 6d. *Chlorate of potash* dull. *Chlorate of soda* fairly firm. *Saltcake* in good demand. *Green copperas* is not in quite such brisk request. *Cream of tartar*, crystals and powdered, lower—powder, 82s. 6d.; crystals, 80s. *Hyposulphite of soda* dull. *Bichromates of potash and soda* in steady request. *Sulphate of alumina* of best qualities moves fairly well. *Barium compounds* generally are firm.

The Liverpool Drug-market.

Our Liverpool correspondent, writing on November 25 says that the upward movement in *Castor oil* has been stayed for the moment, but at the same time good seconds *Calcutta* have maintained their position, and the present value is 3½d. per lb., and holders are very firm in their quotations. First-pressing French has fallen away somewhat in consequence of heavy arrivals, and 3½d. may be considered as the price of the day, but some importers are indisposed

to accept this price, and look for better figures in the near future. Madras good seconds are offered at 3½d. to 3¾d. and second-pressing French offers at 3¾d. to 3¾d. per lb. Sales of *Kola nuts* have been effected at 3½d. per lb. for fair dry in limited quantities. *Canary-seed* is practically featureless at the present time, and the current quotation of fine bright Turkish is about 23s. 6d. to 29s. 6d. per quarter. In *Beeswax* more business has been done during the week, and 20 bags of *Californian* have changed hands at 6l. 10s., and also 33 ballots of *Gambia* at the same price. *Chilian* is held firmly at prices varying from 6l. 12s. 6d. to 7l. 10s. per cwt. In *Gums* the pause in the demand for *Soudan sorts* shows no sign of disappearing, the sales occurring being only of a trivial character, without change in value. Medium qualities continue rather neglected, and except that an arrival of about 1,500 packages *Niger* has just taken place, there is no special feature to remark upon. *Cream of tartar* is a shade easier for the week, and sales are possible at 81s. to 82s. for first white French. *Sulphate of copper* is again dearer, and sales forward are being made at 17l. 15s. to 18l. per cwt. *Spermaceti* is still held for 1s. 5d. per lb., a large parcel of *Chilian*, just arrived, having been sold from the quay at something less. *Honeys* command a fair measure of attention, and sales of fine *Californian* have been carried through at 32s., but 40s. is asked for finest white.

The Hamburg Drug market.

Our Hamburg correspondent writes on November 24:—"Business is very quiet here at present, partly owing to a strike of the dock-labourers which has broken out this week. Our drug-market is also quiet, with very few changes of price since last week. *Balsams* are unchanged: *Copaiba*, genuine Maracaibo, sold first hand at 390m. per kilo.; *Peru* firm, at 16m. per kilo.; *Tolu* firm, at 7m. per kilo. *Camphor (refined)* is very quiet and shows little business; to-day's quotation is 310m. to 315m. per 100 kilos. *Cape aloes* is quiet and offering at 45½m. to 45m. per 100 kilos. *Star-anise seed* is unchanged at 210m. to 215m. per 100 kilos. *Glycerine* is unchanged and firm. *Oils (essential)* continue firm with few exceptions. *Star-anise oil* is weaker: spot is quoted 13m. to 19m., for shipment can be bought at 17½m. to 18m. per kilo. *Peppermint oil (Japan)* is quoted 7½m. per kilo. for shipment. *American*, HGH is firm at 7½m. to 7¾m. per lb. *Citronella oil* is very scarce, and little offering. *Lemongrass oil* is also firmer. For shipment business has been done at 6.40m. per kilo. *Quinine* is very quiet at 25m. per kilo.

The Amsterdam Drug-market.

Our Amsterdam correspondent, writing on November 24, states that about 27 tons of new-crop Java cassia fistula has arrived. Four tons were offered by auction, but only about 12s. per cwt. was bid, and the owners will not sell for less than 13s. 4d. per cwt. The crop is of fair quality, but not fine. A small parcel of cassia-pulp has also arrived. *Cubeb*s remain quite neglected and without business. About 138 boxes of fine second Sumatra *Benzoin* have changed hands at about 8l. 7s. 6d. per cwt. Only common qualities are now left in stock, but for these there is no demand. *Cananga oil*: Fresh arrivals have filled the requirements, and for the present there is no demand.

The Smyrna Opium-market.

Our mail reports from Smyrna are dated November 14. Our correspondents state that a considerable revival has suddenly made itself felt on the market, and large sales have been made at firm rates. All varieties of opium have been dealt in, the transactions for the week being as follows:—

175 cases *Talquale*, *Adette*, *Karahissar* and *Yerli*, 8s. 6d. to 8s. 9d. per lb. for exportation.

30 cases *Karahissar* for the Dutch Indies, at 9s. 3d. per lb. 11 cases *Talquale*, 8s. 9d., for speculation.

The real transactions have been considerably larger, but an appreciable proportion of the opium bought has been rejected by the buyers, and is not calculated in the above statement. The arrivals up to date are 1,778 cases, against 3,001 cases at the same time of 1895. Rains have fallen abundantly all over Asia Minor, as is generally the case at this time of the year, and have put an end to the fears of drought that were entertained in some quarters.



Memoranda for Correspondents.

In letters for publication correspondents are requested to express their views as concisely as possible.

Correspondents should write on one side of the paper only, and devote a separate piece of paper to each subject of inquiry.

The name and address of the writer should accompany all communications with, if desired, a distinctive nom-de-plume.

Chemists and the English Language.

SIR,—When I last wrote to you I had no intention of further prolonging a discussion of which you and your readers must alike be tired; but I cannot refrain from reminding Mr. Pike that it was not the "dovecote" which was "fluttered." Shakespeare puts into the mouth of the great Roman the words—

That, like an eagle on a dovecote, I,
Fluttered the Volsces in Corioli.

The language of the "Radical M.D." is magnificent. I cannot help suspecting that he must be the unacknowledged author of a grand, although somewhat florid, version of the twenty-third Psalm, which contains, among other gems, this exquisite passage:—

Indubitably, though I should perambulate the glen of the umbrage of sepulchral dormitories, yet will I not be perturbed by appalling catastrophes.

Or, again—

Thou positest a refection before me within the ken of inimical scrutiny; thou anointest my locks with odoriferous unguents; my chalcids exuberates.

I can assure my radical brother that it would never occur to me to dispute his right to use any gibberish that may seem good to him, or to use it in any sense that he pleases; but I would humbly point out that there are limits to this freedom, at least on the occasions when he may desire to convey a clear idea of his meaning to others. His only way of escape from these limits would be by compiling a private dictionary for the use of his friends or disciples; and, failing this, he must accept a not uncommon penalty of greatness—the penalty of being misunderstood.

I have the honour to be, sir,

Your most obedient servant,

Harley Street, Nov. 16.

R. BRUDENELL-CARTER.

SIR,—If you are not tired of this subject, I should like to apologise to "Lincolne, Senr." for my somewhat curt dismissal of his suggested derivation of the word "rely." I wrote very hastily, when on the point of leaving home, and I must confess that I did not, and still do not, think his suggestion worthy of consideration. I did not give a derivation of my own, because I had already done so; and I did not refer to Dr. Murray, because he, alas! is not yet "within measurable distance" of the word. The true derivation is, however, given in Skeat's Etymological Dictionary, and, I think I may add, in every other etymological dictionary worthy of the name. But, be this as it may, your correspondent's derivation really will not do. We might as plausibly (with *Punch*) derive our English word Parliament from the French verbs *parler*, to speak; and *mentir*, to lie. The verb *relier* is compounded of the prefix *re*, and the verb *lier*, to tie, and means, literally, to tie back, or, to tie again. We have never had the word in English, and it is, therefore, extremely unlikely that we should have a derivative from it. Our word "rely" bears quite a different meaning, and has done so from the date of its coinage. It signifies, primarily, to lie back, or recline, and hence, to repose. To rely upon a thing is to rest upon it, to trust to it; and a reliable thing is one upon which we may so rest or trust. I maintain that these phrases do convey an idea, the idea of trustworthiness, to every one whose

intelligence has not been so refined that there is left no residuum of common sense.

Epworth, November 13.

I am, &c.,

C. C. BELL.

SIR,—Why should "Lincolne, Senr." object to the extra three letters in "trustworthy," and yet defend the long and altogether illogical word "manufactory"? In Lancashire, at any rate, we are content to speak of things being made in a factory (without the manu-), or, better still, in works. I think the pity is we did not find an equally good word for the finished article.

Yours very truly,

E. W. R. (229/37)

November 16.

SIR,—Mr. Bradenell-Carter is to be congratulated on the agility he displays in turning the tables on his critics, and the capital he makes out of what he considers the weak points of their letters.

His reply to my modest contribution sent me back to his original letter, and I must say that a second reading thereof has not convinced me that I was guilty of perverting the general sense of his words in the way he now complains of. If I did unwittingly misinterpret his meaning, I must plead the unfortunate juxtaposition of some of his own sentences. What Mr. Carter said was "that the greatest sinners against the purity and correctness of English were politicians, whose apparent object is often to string words together in sufficient order to form sentences which, when formed, shall be found to convey no particular meaning." Immediately following this deliverance came the sentence beginning, "In this connection I was amused by your own reference to Mr. Gladstone," and the paragraph terminated thus: "I have never heard it suggested that anything which Mr. Gladstone has written will live."

As for the "unquenchable eloquence," that, of course, was my own way of referring to the untiring and perennial flow of language which Mr. Gladstone has always at command on almost any subject. That the majority of his utterances are only of ephemeral interest, no one will deny; but it surely savours of rashness, if not of prejudice, to predict that none of them are imperishable.

Mr. Carter raises a quibble over "eloquence." I used it in the perfectly legitimate sense of including the written, as well as the spoken, word. Mr. Carter seems to think it should be confined to the latter only.

Yours truly,

Brighton.

C. S. ASHTON.

Cutting and Anti-Cutting.

SIR,—Beyond stating, as I have previously done, that our Association have neither publicly nor privately charged Mr. Day with breaking his agreement, I have no more to add to our explanation of the action we took in regard to his firm. Mr. Day commenced a campaign against the Association, and wrote threatening to take such steps, by way of labelling and circularising, as were calculated to injure the sales of any article which was put upon our protected list. The proprietors of the protected articles, no one can deny, acted well within their rights in taking steps to prevent this company obtaining their articles and carrying out their threats in regard to them. Mr. Day has himself published the whole of the correspondence, and so far as I am concerned I am prepared to let that correspondence decide the issue. Mr. Day does me the honour of desiring my opinion upon several matters, and asks me a number of questions in the interests of all who have signed the P.A.T.A. agreement. As the Secretary of the Association I can have no opinion apart from the Council. This much I may venture to say—that the opinion of our executive as to the action taken by Mr. Day in regard to the protected articles may be very accurately gauged from our subsequent dealings with his firm. To discuss the ethics of the general question with a gentleman who has personal motives for holding a hostile opinion would only be wasting my time and your valuable space, though I have no doubt, if Mr. Day can produce his credentials as a spokesman for all the firms who have signed the P.A.T.A. agreement, that our Association would be delighted to give any explanations in its power. I should

also be glad to enlighten any individual firm interested in the matter upon any question in regard to our agreement.

I am, Sir, yours respectfully,
2 and 3 Stonecutter Street, W. S. GLYN-JONES.
London, E.C., Nov. 16.

SIR,—Pressure of business has prevented my replying before this to the letter from Mr. Glyn-Jones which appeared in your issue of November 7.

To my statement in a previous letter to the effect that our sale for the whole of the "protected" articles (some thirty in number) only amounts to about 1½ per article per week per shop, Mr. Jones replies, or rather asserts, that either some of our branches must be in a very bad way or else that the amount of substitution therein is even more appalling than he had estimated. I can show that it is not our branches which are in a bad way, but the articles that are on the "protected" list, for our sales of a number of "unprotected articles" are greater per single article than that of the whole thirty combined, whilst our balance-sheet effectually proves that we cannot have a number of unremunerative branches. I will refer to the substitution charge later.

Mr. Jones asks, if the success of the P.A.T.A. means the crippling of the proprietary trade, how it is Messrs. Barclay and other wholesale houses have joined the Association? Now, when I spoke of crippling the trade, I alluded, of course, to the trade done by the manufacturers, not by the middlemen. Some of the wholesale houses who are getting "left" in these days of competition will naturally be delighted by a scheme that, in the remote event of its being successful, must extinguish the competition they dread. The most effectual reply we can offer to Mr. Glyn-Jones as to the opinion of practical men on the scheme, is that since his boycotting plan of campaign was started the proprietors of articles which are singly of more weight and importance than all the thirty which remain connected with it have withdrawn their active participation in the movement, very wisely refusing to allow their valuable properties to be used as a lever to put up the prices of sundry insignificant articles of slow sale to full face values. Not only so, but they decline to allow that cash customers should be put on the same plane as credit buyers, who only pay in six or twelve months, or perhaps not at all.

Re Substitution.—"I am thankful, however, to say that I do succeed in selling a large proportion of my own goods in the place of other people's goods." Thus Mr. Glyn-Jones.

We admire his candour, and by no means wish to insinuate that he is acting otherwise than perfectly honourably in so doing. When we turn to his conclusions as to company business, we find quite a different state of mind actuates him. What he regards as a matter of business with himself he apparently considers as a base fraud when done by a company, and would fain induce the manufacturers to consider it in the same light. Let that pass. What we want to come at is a matter-of-fact statement. Reading Mr. Glyn-Jones's letters, one would unmistakably conclude he intended your readers to believe that of our business one-half was made up of sales of our own goods in the place of other people's. Alas! no. I am prepared to give 50% to the fund for fighting the dentists if it can be proved that our sales of goods of our own manufacture, or which are manufactured solely for us, and which compete with the proprietary articles made by others, comes to more than 2s 6d. in the pound of our total sales. For this purpose we would be willing to accept the decision of an accountant, approved by ourselves, but chosen by you, Mr. Editor, to whom our books would be open to the extent necessary for the purpose. Our experience proves that it is unreasonable for us to expect our managers to sell a greater proportion than that indicated above, which is insignificant compared with what Mr. Glyn-Jones owns to. He has said exact data could not be supplied as to our sales. We have given him data. We note attempts have been made to prove a case against Mr. Day's company by trapping his assistants into recommending other preparations than those asked for. This, however, is no test; the air of a man who is willing and even anxious to accept something other than he demands is apparent even to an apprentice, and he generally gets that something else.

Now is window dressing a test. We do not know any

chemist's shop where the existence of, say, Holloway's pills could be even suspected from an inspection of the window, which is invariably filled with, say, little liver-pills prepared by Gwynne Jones, A.P.S., or (to be candid), say, with Perry's pearl pills—sole agents, Boots, cash chemists. We lay no claim to a monopoly of virtue of self-denial in respect to the sale of such articles. We merely state a case in our favour, which we are confident is favourable to us from a manufacturer's point of view, in that the sale of their articles in our shops is infinitely larger, but much less cut into by competing goods, than at the shops of private chemists.

Yours faithfully,

JESSE BOOT,

November 25. Managing Director, Boots (Limited).

SIR,—I am pleased to notice J. B. making a move in the right direction. I would again urge chemists to charge for exhibiting showcards and window-plates, also for distributing bills over the counter. Advertisers have to pay everyone but the chemist for work done. By looking after this source of revenue and joining at once the P.A.T.A. there will be better times ahead.

Yours faithfully,

SUAVITER. (229/21).

Beautifying Bethnal Green.

SIR,—As you refer in last week's number of THE CHEMIST AND DRUGGIST to a wall we applied for leave to erect "enclosing a certain proportion of public land" near our works, we may, perhaps, explain that we have simply asked leave from the Vestry to erect a new wall in lieu of an irregular and recessed fence in a line with the adjoining houses, the object being to gain a slightly and suitable entrance to a piece of ground that we are taking on lease from the Great Eastern Railway Company, and which includes eleven railway arches and some large yards that we contemplate glazing, and which, when finished, will give us about 12,000 square feet additional ground-floor premises. To these premises we hope shortly to remove our receiving and bottle-washing departments, as well as our carpenters' workshops, &c., and thus to release a large additional space in our works for manufacturing purposes. In the small space just granted to us the parish will gain in improved appearance much more than they will lose by giving up a few feet of an unnecessarily wide pavement.

That we do not wish to appear as enclosers of public land in East London must be our excuse for troubling you with this letter.

Yours truly,

ALLEN & HANBURY (LIMITED),

FREDERICK J. HANBURY,

Director.

The Drug-trade in Glasgow.

SIR,—Where do all the qualified men go? It seems they are not much in demand—in the West of Scotland at any rate. A friend of mine has been looking up the main advertising paper for the West—viz., the *Glasgow Herald*—and the following speaks for itself:—

DRUGGIST.—Wanted immediately, smart Youth, 2 or 3 years' experience.—7042, Herald Office.

DRUGGIST.—Lad or Girl for Doctor's Dispensary, South Side.—6914, Herald Office.

DRUGGIST.—Lad Wanted; 2 or 3 years' experience.—7234 Herald Office.

DISPENSER for Doctor's Shop, male or female; must be honest and up to retail.—Apply Peddie, stationer, Cambuslang.

Glasgow beats all other places for open doctors' shops. The above cutting was taken out of the *Herald* of November 16.

Yours,

MERCURY. (230/61.)

The late Mr. Thomas Burbidge's Will.

SIR,—We should be obliged if you would kindly make a slight correction in the statement you have made of the effect of the will of the late Mr. Thomas Burbidge.

You state that all Mr. Burbidge's interest in No. 16 Coleman

Street is given upon trust for his niece Temple, the wife of Colonel Colville. This leads to the inference that Mr. Burbidge's interest in the business of Burgoyne, Burbidges & Co. has passed to Mrs. Colville, whereas what is given to her was his interest in the premises occupied by the firm. Mrs. Colville has no interest whatever in the business of the firm, which now belongs to Mr. Thomas Farries, the surviving partner.

Yours faithfully,
BURGOYNE, BURBIDGES & CO.

LEGAL QUERIES.

230/70. *Exox*—Red precipitate is a poison, and we suppose, in accordance with past decisions, the sale of any compound containing it would be equivalent to the sale of the article itself. We cannot tell you how a magistrate would treat a summons under the Sale of Food and Drugs Act for selling as chlorodyne a mixture containing neither morphia nor chloroform. If the case were properly presented to him we should think he would convict. Perhaps ether might be substituted for the chloroform. For "sweet nitre" you would be justified in selling the P.L. preparation. If the inspector wants the B.P. article he ought to ask for spirit of nitrous ether.

229/5. *Scipio*—We cannot make trade-mark searches, but you may safely rely that nobody could get registration of the words "curative syrup," which are descriptive. It might be possible, however, for another firm to infringe the rights of the original makers by putting up another syrup in style too closely resembling theirs.

229/41. *Perplexed*—Having made the agreement not to carry on business within three miles of the business you have sold, you clearly cannot rescind that agreement except with the consent of the other party to the agreement. We do not gather from your letter whether he is willing to come to terms with you. If he is, we should think he might fairly claim to be repaid the sum he paid for goodwill before he allows you to open a new business. He would probably get that if he brought an action. The scheme you propose to evade the agreement would not be successful unless it were absolutely *bona fide*. Of course, if you sold "everything" the dental instruments and the goodwill in that part of the business were included.

211/2. *J. C. M.*—The first step in trade-mark registration is to order at a money-order office the 5s. application form. If the name of the article is descriptive it will not be registered. See the article in the DIARY, page 381.

235/17. *T. M. E.*—The admixture of alum with articles of food is an offence under the Sale of Food and Drugs Act, section 3 (the admixture of any ingredient which may be injurious to health).

232/20. *Mulum.*—Black beer, if it contains over 2 per cent of proof spirit, may only be sold by persons holding a beer-licence. In practice the Board do not prosecute if the proportion of proof spirit is under 3 per cent. Belladonna-plasters may only be sold by registered chemists.

235/11. *J. R. H.*—The label does not appear to us to render the cough-mixture liable to medicine-stamp duty; but why not get an authoritative opinion from Somerset House?

122/39. *Mel Boracis.*—You can trade under a fictitious name if you like; so can a company if the Registrar will accept the title. A company may keep open shop for the sale of poisons, and call itself a chemist; but only a qualified person may actually sell poisons. The poisons must be labelled with the name of the company.

232/65. *Cots.*—You can only give security without publicity by depositing with the lender something of value.

236/22. *G. B.*—We should think your label renders the oil liable to medicine-stamp duty unless it is a compound preparation.

236/14. *Indentures.*—An apprentice is not bound to finish his time if he reaches the age of 21 before the expiry of the term. We should say he could not claim the indenture in such a case. The master would probably be able to recover damages from the apprentice's guardians, who made the contract with him, if the contract were broken.

237/66. *M. W. J.*—The Margarine Act provides that all substances, whether compounds or otherwise, prepared in imitation of butter, and whether mixed with butter or not, must be sold under the name of margarine and under the conditions set forth in the Act as to packing and labelling.

MISCELLANEOUS INQUIRIES.

224/66. *Power of the Press.*—Reply 218/36 also applies to you.

219/49. *Meiningen.*—See the section of liniments in the forthcoming DIARY. The acetic lin. album will suit your purpose.

219/5. *Phosphorus* asks why Elixir Phosphori, made according to Martindale, is white at first, and after some days becomes clear. [A trace of the phosphorus is precipitated, becomes oxidised, and the oxides dissolve in the liquid.]

222/22. *Hotspur.*—Matting-acid is a mixture of silicofluoride of ammonium, in fine powder, and hydrofluoric acid.

221/59. *C. T. B.*—We have no means of knowing what the stuff is made of without examining a specimen. Cannot you match it yourself?

222/20. *A. W. L.*—You will find a formula in the new DIARY.

218/13. *Proprietary* asks us what would be a fair price for a patent medicine established six years, and yielding 75% annual profit at the present time. Three years' purchase, we should think, but much depends upon the nature of the speciality.

222/62. *Scribe* (Straits Settlements) complains that indiarubber rings used for Codd's bottles give a nasty taste to soda-water bottled where he is. How is this to be avoided? [Make a sulphurous bath with calcium-bisulphite solution 10 oz. (or sodium metasilphite 4 oz.) in 10 gallons of water. Immerse the rings in this bath for an hour or two; then wash with cold water next with washing-soda solution (1 oz. to the gallon), and finally with water.]

222/66. *Lemon.*—No workable process for isolating citral by means of a bisulphite has yet been published; but see *C. & D.*, February 22, 1896, page 304, and April 25, page 599.

225/15. *Dispenser.*—The Dispensing Charges for club patients are usually as follows:—Mixtures, 1d. per oz., minimum 4d.; lotions, $\frac{1}{2}$ d. per oz., minimum 3d.; powders, 6d. to 8d. per doz.; pills, B.P. or stock 3d., special 6d. per doz.; liniments and other preparations according to value.

222/65. *Query*—Shampoo-powder, to retail at 1*d.*—See November 7, page 700. Hudson's soap-powder, perfumed, is also given. See reply 223/62.

222/53. *Nomen*.—Messrs. W. J. Bush & Co. distil oil of elder; and Messrs. Hearon, Squire & Francis showed us last year a specimen distilled by themselves. Moreover, the oil is imported in fair quantities from Germany, although it is not so nice as the English. It is a more expensive oil than otto of rose. It is remarkable that your wholesale house knew nothing about it. Perhaps they may be able to supply you with terpineol, which is the artificial-elder scent.

223/57. *T. F. W.*—We have never seen syrupus and syr. scillæ made strictly B.P. which did not crystallise. See the paper by Mr. Naylor in *C. & D.*, June 8, 1895, page 805.

223/55. *A. W. E.*—We cannot work out chemical calculations for correspondents except when they are of special or general interest, and yours is a purely elementary one.

224/64. *T. S.*—Magnetic Snuff varies in composition. That sold in 1*d.* boxes is sodæ carb. exsiccât.

224/52. *Inquirer*.—Hair-wash for hair falling off. The formula in *C. & D.*, April 25, page 616, is quite suitable. So also is that on page 229 of the 1896 DIARY.

224/28. *Canary*—Pick-me-up Tonic for Cage birds:—

Pulv. croci	5j.
Ferri sulph. gran.	3ss.
Pulv. fœnugræci	3ss.

M.

A pinch of the powder to be put on top of the seed every morning.

224/18. *Qui Hæc*.—You will find what you want in the 1897 DIARY.

224/42. *Jumbo*—(1) There are various hints in "Veterinary Counter Practice" regarding the treatment of blackleg. You should refer to it. (2) You will find good formulæ for all the preparations you want in the current and past volumes. See, for example, *C. & D.*, September 26, page 503. You seemed to have overlooked the large number of formulæ which we published last year under the title "Counter Practice" as the result of a competition. We do not think that another competition would catch on at present.

224/8. *Brixton*.—All that we can tell you about sticky fly-papers you will find in the 1896 DIARY, page 229. We cannot say how the reels are made.

225/3. *A Subscriber*.—You can keep opium soft in jars tied over with linen dipped in a mixture of glycerine 1 and water 3 parts, with bladder above the linen.

223/27. *Lincs*.—See "Veterinary Counter Practice," which you may obtain from our office.

223/54. *Chemicus*.—We cannot supply an approximate formula for Norton's pills.

218/16. *Customer*.—Sloed Gin.—Put one tablespoonful of crushed sugar-candy in a quart bottle, fill the bottle with sloes, then cover them completely with gin. Seal hermetically. The gin will be ready for use in three months, but is better if kept corked for six or twelve months.

71/96. *Don*.—Your sample has been mislaid. Can you send us another?

221/47. *R. L. M.* sends samples of a Peculiar Linen-glaze consisting of a "wax" and a powder. The article to be ironed is rubbed with the powder, the wax then rubbed on the top of the powder, and ironed in the usual way. We find the powder to be a mixture of spermaceti and French chalk—about 1 oz. of spermaceti to 1 lb. of chalk. The "wax" is a cocoa-nut oil soap. "R. L. M." will find formulas for the other things he wants in the 1894 DIARY and back numbers.

199/25. *M. K.*—Cough-powder for Horses:—

Ferri sulphat.	v.
Sulph. nig.	3iv.
Acid. arsenios.	5j.
Pulv. resinae	3ij.
Pulv. anisi	3i.
Pulv. glycyrrhiz.	3vi.

M.

The above is as near your sample as we can get. Dose: a teaspoonful thrice daily with food.

221/70. *Boricum*.—Preservative Powder for Meat.—The sample has the ordinary composition—viz., equal parts of borax and boric acid, allowed to deliquesce, then dried to granulation. The directions are: For 28-lb. sausage, polonic, saveloy, pie, and potted meats use 2 oz. of the powder, mixing well; for milk, 2 oz. to 12 quarts; for soups, gravies, and jellies, $\frac{1}{2}$ oz. to 1 gallon; for brine, 7 lbs. to 100 gallons; and for fermented drinks, 2 lbs. to 100 gallons.

222/14. *J. W. B.*—The Poultry-spices, which are so highly spoken of, are nearly alike. No. 1 seems to consist of—

Pulv. gentianæ	3ij.
Pulv. fœniculi	3j.
Pulv. ferri sulphat.	3i.
Pulv. glycyrrhiz.	3j.

Mix, and add to 1 lb. of bran-meal.

No. 2 contains some bone-ash in addition.

223/62. *G. J. T.*—Shampoo-powder.—The sample is like many others which we have reported upon. You can make a similar one by mixing 1 lb. of borax soap-powder with sufficient phosphine (or other aniline orange colour) to give it a canary tinge; add 10 drops of oil of rose-geranium, and sift. Put up in 5ij. packets.

220/27. *S. H.*—The Horse-spice which your customer says "brings a horse round sooner than anything, although he has had the usual run of horse-powders," closely resembles the following:—

Black antimony	5ij.
Powdered nitre	5i.
Common salt	5j.
Powdered cinchona	5ss.
Powdered liquorice	5ij.
Brown sugar	5ij.
Powdered fenugreek	5i.
Powdered Jamaica pepper ..	5j.
Locust-meal (dark)	3j.

Mix.

This to make a packet.

Directions:—For entire horses and the like, one packet daily; for working-horses, one twice a week; for horses out of condition, a tablespoonful with each feed.

224/16. *Tobacco*.—The mixture is one of ext. salicis nig. Write to the secretary of the hospital about it. See 1897 DIARY, page 500.

224/15. *Felmorb.*—We regret that we cannot assist you.

227/71. *Fluate*.—The chemical called Fluate, which builders use for washing Bath stone, consists chiefly of alum with about a fourth of carbonate of soda.

220/27. *S. H.*—The liquid used for greyhounds, and which is a Fine Thing for Worms, is not easily analysed, but we think you will find the following to match it:—

Venice turpentine	3i.
Lin-seed oil	3iv.

Heat together and add—

Liquid paraffin	3viij.
Powdered cloves	3j.
Powdered cassia	3j.
Wood-tar	3ij.
Croton oil	3ss.

Digest in a covered vessel beside the fire for two days, and filter.

The dose should be a teaspoonful upwards.

115/3. *J. C. L.*—(1) Powder for Turning (we presume wood-turning) is soap washing-powder consisting of silicate of soda 1, powdered soap 1, and carbonate of soda 4, scented with citronella. (2) Romanes—Ro-ma-nes; Cheyne—Shain, but the old Scotch way of it is Sheen. (3) All our books are sold in single copies at net prices, and to this there is no exception.

230/3. *Devin.*—The best emulsion we can get with your pitch oil is by adding to it a fourth of its volume of resin oil and raponifying with caustic soda. Say pitch oil 1 pint, resin oil 5 oz., caustic soda 4 oz., water 1 pint. Dissolve the soda in the water and add to the mixed oils, then shake. Separation takes place, and a white emulsion is impossible owing to the dark colour of the sample.

232/1. *Limelight.*—It is Dieterich's ferro-peptonate solution which you mean. See the advt. in the *C. & D.*

C. & D. Diary, 1897.—The following correspondents will find the formulae which they ask for in the *DIARY*, to be delivered next week:—231/32 (*Nemo*), 211/3 (*Palatable*), 234/20 (*Compound*), 234/23 (*Buero*, Turin), 235/13 (*A. F. Golden*), 225/15 (*Constant Reader*), 236/10 (*Lavender*).

232/28. *G. C. D.*—You have not copied the second word properly. The first word is "Natr."—i.e., sodium. The original should have been sent.

227/16. *B. H. B.*—We would not alter the cough-mixture at all. It is nice as it is, and if any sedative is wanted add ammon. brom. gr. iiss. to each dose.

228/11. *Subscriber* (Bradford).—There is little nitrous ether left in your cough-mixture after a week or two, but we would not alter the formula at all. It is quite different from the one commented upon in our issue of November 14.

228/17. *G. B. F.*—Three parts of powdered curd-soap and one part of borax are a good mixture for Starch-glaze to sell at 1d. per oz. Please note that we do not regard the fact of correspondents not filing the *C. & D.* as an excuse for giving them replies on subjects treated in recent issues. That is their fault, not ours, and if they want the information they must get the numbers again.

INFORMATION WANTED.

The Editor invites, on behalf of inquiring subscribers, postcard replies to the following:—

232/1. Makers of limes for limelight.

234/32. Maker of, or agent for, Edmund's cooling and freezing machine.

235/2. English agent for Carollas hair-tonic.

Coming Events.

Notices of Association and Society meetings will be inserted in this section free of charge if we receive intimation of such meetings by Wednesday of the week previous to that in which the meetings are to be held.

Saturday, November 28.

Pharmaceutical Football Club v. Earlsfield Ramblers, at Garrett Green. Kick-off at 3 P.M. Train from Waterloo (S.W.R.) to Earlsfield Station at 2.17 P.M.

Metropolitan College of Pharmacy. Annual dinner in Throne Room, Holborn Restaurant, W.C., at 6.30 for 7 P.M.

Monday, November 30.

Society of Arts, John Street, W.C., at 8 P.M. "The Use of Gas for Domestic Lighting." By Professor Vivian B. Lewes.

Tuesday, December 1.

Ulster Pharmaceutical Association, 5 Royal Avenue, Belfast, at 8 P.M. Mr. D. W. Elliott on "Leeches."

Bradford Chemists' Association. Leuchter's Restaurant, Darley Street, at 8.30 P.M. Debate on "Should Doctors Dispense?" Aye, Mr. Silson; No, Mr. Dunn.

Wednesday, December 2.

Brighton Junior Association of Pharmacy, Newbury Hall, at 9 P.M. Social and musical evening, Mr. W. W. Savage in the chair.

Midland Chemists' Assistants' Association, Exchange Rooms, Birmingham, at 9.15 P.M. Short papers.

Pharmaceutical Society of Great Britain, 16 Bloomsbury Square, W.C., at 11 A.M. Council meeting.

Pharmaceutical Society of Ireland, 67 Lower Mount Street, Dublin, at 3 P.M. Council meeting.

Society of Arts, John Street, W.C., at 8 P.M. "The Teaching of Economics." By W. A. S. Hewins, M.A.

Thursday, December 3.

Chemical Society, Burlington House, Piccadilly, W. at 8 P.M. Papers to be read:—"Constitution and Colour," Arthur G. Green; "Some Experiments on Sea-water," E. Sonstadt; "Derivatives of a Hydrindone," O. Reiss and F. S. Kipping, Ph.D., D.Sc.; "Notes on Nitration," H. E. Armstrong; "2:3' Bromobetanaphthols," H. E. Armstrong and W. A. Davis; "Derivatives of Nitrobeta-naphthols," W. A. Davis; "Morphotropic Relations of Betanaphthol Derivatives," W. A. Davis; "Researches on Tertiary Benzenoid Amines," Miss C. Evans. Ballot for election of Fellows.

Chemists' Assistants' Association. Cinderella dance in Portman Rooms, Baker Street.

Proprietary Articles Trade Association, at 3.30 P.M. Meeting of the trade of the Potteries at the North Staffordshire Hotel, Stoke, Mr. J. Averill, J.P., presiding.

Glasgow and West of Scotland Pharmaceutical Association, 94 West Regent Street, at 9.15 P.M. Discussion: "Is the Proprietary Articles Trade Association worthy of the support of retail chemists?" Aye, Mr. James Moir; No, Mr. J. Anderson Russell. In order to give full opportunity for discussing this subject, the reading of short papers has been postponed.

Friday, December 4.

Edinburgh Chemists', Assistants', and Apprentices' Association, 36 York Place, at 9.15 P.M. Mr. C. F. Henry on "Uniformity of Pharmacy"; and Mr. J. R. Hill on "Botany in December." Open meeting.

Westminster College of Chemistry and Pharmacy, at 6.30 P.M. College dinner in Throne Room, Holborn Restaurant, Mr. G. S. V. Wills, F.L.S., in the chair. Distribution of prizes by Mr. H. Wootton, B.Sc. To be followed by a cinderella in the King's Hall, Holborn Restaurant, at 9 P.M., to celebrate the 21st birthday of Miss Georgina Wills.